NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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OCTOBER FANCIES AND FACTS.

"When all the gay scenes of Summer are o'er,
And Autumn slow enters so silent and sallow;
And millions of warblers, that charmed us before,
Have fled in the train of the sun-seeking swallow.
The blue-bird forsaken, yet true to his home,
Still lingers and looks for a milder to-morrow;
'Till forced by the horrors of Winter to roam,
He sings his adieu in a lone note of sorrow."
—*Wilson.*

OCTOBER, in New England, presents some of the most charming scenes ever presented to the eye. Thomson, in the Seasons, speaks of the autumnal foliage in England, in glowing terms. Even that, probably, bears no fair comparison with what we always see here in October. Many years ago, Dr. Dwight, then President of Yale College, asked an intelligent Englishman of taste, while admiring with him this autumnal foliage near New Haven, why the poets of England ever used the terms *brown*, or *russet*, in their descriptions of autumn, and received an answer to this effect: "*Because they never saw any other; such a scene as this never blest their vision.*" Descriptions of some of our autumn scenery, which were perfectly just, would scarcely be credited by the English people. With us, the coloring is not only infinite in its shades, but glistens and sparkles in its gorgeous profusion.

To notice this in perfection, however, one should travel by team through a region diversified by hill and valley, so as to see the foliage of the oak, beech, maple, hickory, birch, &c., interspersed with the pine, hemlock, spruce and hackmatack. Then, on the hill-sides and hill-tops, or on the edges of the charming meadows that so beautifully contrast with the higher lands, the sun may be seen lighting up entrances to the woods with a splendor that reminds us of some grand cathedral, with its burning lamps, pictures, statues, and other works of art. We must see it when the morning sun breaks mildly from the east and first touches the leaves on the tree-tops, pencilling them with unnumbered charming colors. So in the fervid noon, when the unshadowed sun pours fiercely upon the forests and kindles up a carnival of colors; or, amid the soft haze of the setting sun, when its feebler rays give a world of softer, but not less impressive and beautiful coloring. The full glory of the forest cannot be realized from a single point. We must see it on hill and plain, in the sweet meadows where the brooks meander and babble, and in deep gorges among the mountains.

So, early *October* is the time to travel, when boughs are bending with fruit and apples drop in the stillest hours. Leaves begin to let go when no wind is out, and swing in long waverings to the earth, which they touch without sound, and lie looking up, till winds rake them, and heap them in fence corners. When the gales come through the trees, the yellow leaves trail, like sparks at night behind the flying engine. The woods are thinner. The days are calm. The nights are tranquil. The Year's work is done, and walking in gorgeous apparel, she looks upon her long labor, and her serene eye saith, "It is good."

So the *October* days entice us into the open air. There is health in it, if we will but exercise and freely drink it in. The woods are full of beauty. The brooks sing in the valleys, and all nature invites the invalid, the pleasure-seeker and the man of business, out into the elastic and invigorating air.

"There pours a glory on the land,
Flash'd down from heaven's wide portals,
As Labor's hand grasps Beauty's palm,
To vow good will to mortals;
The golden year brings Beauty down,
To bless her with a marriage crown,
While Labor rises gleaning
Her blessings and her meaning."

October, however, is not only a pleasant month for sight-seeing and visiting, but for performing many duties of the farm, which ought not to be postponed to any other day.

Poultry.—When Thanksgiving comes, it is pleasant to go to the poultry-house and find something there to grace the dinner-table, around which our kindred and friends are to assemble and help us enjoy the bounties of the year, and to be grateful for them. This cannot be done in a week or a month before that time comes, but must be attended to now. See, therefore, at once, that the poultry is well fed on a *variety* of food, has convenient roosting-places, clear water always near, and that the stronger ones do not torment the weaker.

Pork.—A hog will probably grow much more in October than in December, on the same amount of food, as hogs are frequently kept. No animal enjoys more a clean, dry, and warm bed. If flies molest him, he will roll in the mire to keep them off, because he has no hands to brush them away. If the sun pours its burning rays upon him, he will do the same, in order to get cool. If his apartments are consistent with his nature, and he has access to light at will, a dark place to sleep in, and a dry bed to lie upon when he prefers them, he will usually appear with a clean dress on, and have the appearance of a very orderly and tidy animal. His growth will be profitable, and his flesh as sweet and wholesome as any that we use, and indispensable in one form or another in the culinary department.

To secure this, swine must be properly tended in October. The small potatoes, early pumpkins, and windfall sweet apples should be boiled, salted a little, mixed with meal or boiled grain of some kind, and fed to them regularly twice or three times in twenty-four hours. They should have also cool, clean water once each day. The only danger with pork made in this way is, that it is so excellent that persons are apt to eat too much of it.

Draining and the *Muck* heap must not be forgotten. With regard to the first, it is important that something of it should be done every year wherever it is needed. It is better to do it in rather a small way, because it can be better managed in case of storms, or anything that occurs to call attention away from it. Find first the outlet for the surplus water, then the amount of fall, and the best course for the ditches. A little study of engineering, if one is not accustomed to the work, will generally enable the operator to go on correctly.

With regard to the *muck*, it is always well to collect it when water is low on meadows and swamps. It does not hurt by keeping, and is really a *valuable manure* in itself. Lay up stores of it, then, whether it be October or July, if you can consistently with your other work.

Ploughing.—No better time can be found for reclaiming swamp lands—the best lands we have in New England when thoroughly reclaimed, especially if we can control the water which flows through them. On those where the peat is quite coarse and the whole very porous, if the water is taken away too far below the surface, the soil will soon become too light and dry, so that in a hot, dry season, the crops upon it will fail. In such a case, the ditches should be so arranged as to be closed by a dam and a gate, and the water kept back to within twelve or eighteen inches of the surface, or near enough to keep it always moist.

So on uplands. The cool and invigorating

October air is friendly to the team, and the weather will be sufficiently warm perhaps to bring on fermentation of the sward turned under, and thus prepare it as plant food for the next spring.

Apples.—Save the apples. The crop is abundant this fall. A little cider is wholesome to persons of a bilious temperament, and especially to those subject to inflammatory rheumatism. But only a little—half a pint per day, perhaps. Owing to the scarcity of apples for several years past, good vinegar can hardly be found. Now is the time to fill the old vinegar casks. All the vinegar that can be made from good cider may be sold at a profit. Late made cider is best for all purposes. Do not gather winter apples too early. Slight frosts will not hurt them while on the trees. And though leaves are falling, and the flowers are fading, we will go on cheerily, and sing,—

"The Spring, with sun and rain,
Shall call them from the hill and vale
To bud and bloom again."

WHITE WEED.

On going over his mowing fields, the observing farmer will now notice numerous fresh and vigorous stocks of the white weed. Having been cut off when the grass was cut, they have now thrown out fresh leaves in abundance, and are probably taking firmer root than ever. Is it not now a good time to exterminate them, or, at least, to check their growth so that they shall not completely overrun our fields?

Let us, one and all, make a vigorous attack upon them, some in one way and some in another, hoping, that in the midst of numerous experiments, some means of destroying them will be found.

In examining the roots of white weed, we have found them in a mass near the surface of the ground, entirely unlike those of the dock and chiccory, which penetrate the earth from one to two feet.

Now, if the leaves were cut off with a sharp hoe, and a handful of gas-lime thrown upon the surface, would it not completely kill the plant? And if not the gas-lime, some other cheap and virulent substance? Gas-lime may be had at the gas-works in cities, or wherever gas is made, and with small cost, excepting that of transportation.

We have no knowledge that experiments of this kind have ever been made, but it seems that something of this nature may be cheap and effectual. We hope that many will try something of the kind and report to us the results.

In most plants, such as those named above, where the roots go deeply into the ground, it is doubtful whether any application to the surface would destroy the plant; still, gas itself kills trees wherever it reaches their roots, and the gas-lime must be equally destructive. The chiccory roots, are rather slender and long, and throw out very few lateral roots, so that a rain might wash the gas-lime down this single root and destroy it.

If this substance should be efficacious, it would prove of great value to the farmers of New England. There will be no need of hunting for the white weed, for wherever they grow they are perfectly visible now, and will be again in the spring if not destroyed.

On fields nearly covered with them it would be best to plough and cultivate, but where they are introduced in patches, a man might go over two or three acres in a day and cut and dose them.

BEES IN SEPTEMBER.

This is a month of comparative leisure with bees. There is but little done now more than perhaps to change about their stores to some extent in the hives, so that it may be most convenient in winter. Bees, in all well managed apiaries, will be peacefully enjoying their well-earned treasures, and the quiet movements, and the gentle humming about the doors of their houses, speak only of content and happiness.

Bees require but little attention now more than to guard against robbing, and but few operations should be performed upon them, the less the better, at this season. Such jobs as transferring from common to movable comb hives should not be done now under any circumstances; my experience would not warrant transferring bees thus, later than the first of July. If bees are to enjoy the fumes of brimstone, it is time now; but the man who suffocates his bees in the fall for their honey, will sooner or later be troubled with bad luck, depend upon it; while he who is willing for them to share the fruit of their labor with him, that is, who uses a desirable hive understandingly, will succeed, and his bees will grow more and more prosperous each year, as his stock of knowledge of their habits and requirements increases.

We must learn to profit by the experience of others in this as well as in other branches of business; and the careful reading of good practical books on the subject cannot fail to be both interesting and instructive, and well worth the necessary expenditure to procure them. I would especially suggest that bee-keepers look into this matter of hives more, and before another season comes, provide themselves with something better than the old-fashioned box-hive. A good working, movable comb-hive is very desirable, and quite important to people who would keep up with the times in bee-keeping, and these hives cannot be objected to by any one aside from the needless expense of the frames if they are not to be worked.—*G. W. P. Gerrard, Plymouth, in Maine Farmer.*

CURING SOWED CORN.

It is a laborious task to cut by hand several acres of heavy sweet corn. My neighbors find it almost impossible to gather the shocks into stacks, or mow, and prevent spoiling. Besides, standing in the shock in the field through very much wet weather, as we often have in the fall, greatly lessens its value. My plan is to prepare the ground well, sow early, and *roll* after sowing; let it stand until it *begins to ripen*. Here is the main point of success. When the lower leaves begin to turn yellow, the saccharine matter begins to turn to sugar, and then there is *less water to dry out*, and the corn is of much more value. The ground being rolled smooth, you can cut with a machine close to the ground; let it lay four or five days in the sun, then rake with a horse rake and cock up, allowing it to remain in cock two days, when it can be hauled with as much dispatch as the same amount of timothy hay. With the aid of one man and boy we hauled off, last fall, three acres in one day, putting into small stacks and mow, and it kept as bright as needs be. We have practiced this plan for several seasons, and have never lost any.—*Rural New Yorker.*

For the New England Farmer.

THE GARDEN IN OCTOBER.

The season's labor in the garden is now nearly closed; what remains, is to finish gathering and storing late crops, which should not be put off a single day after fully mature and ripe. In this section we had a very wet winter and spring; the winter was mild; spring cool, which delayed planting and vegetation till late, when all at once vegetation seemed to burst forth with a bound, and with rapid, unabated strides came to an early maturity. Early fruits and vegetables are found very good, and much richer than in a more moist and variable season. But the continued drought cut them short, and was quite unfavorable to later planted crops, and considerably abridging the succession of fresh, crisp vegetables from the garden. Should this abridgement teach us to prize a good garden more highly, and incite in us to improve on former practices, the lessons of the season will not be without avail.

Slight frosts injure the keeping qualities of many fruits and vegetables. All such should be gathered and securely stored before frosts occur. Cabbage and some like crops are not injured by light frosts, but hard freezing affects even the cabbage; but usually we do not have such freezes till into November. Aside from gathering and storing the crops, there is much that may be done in the garden to enhance next year's profit, such as annihilating weeds, turning up new subsoil—especially on all heavy or clayey soils—to be amended by the action of frosts, &c., of winter.

Asparagus.—New beds planted out this fall of roots or seed, will be so much done towards spring work. The deeper and richer the beds are made, the greater will be the growth of top. For garden culture I believe the roots should not be set nearer than eighteen inches, and for field culture two feet—four feet is near enough for the best growth. Cover the crowns not less than four inches deep, and then mulch with manure after the ground freezes. "Connover's Colossal" is said to be the best, and a real giant in growth.

Beans.—Gather any that ripened before freezing, if such remain, shell and dry, and then store in a dry, cool place; haul up the poles, and store under cover for another season.

Beets.—These are injured by the least freezing, and should be gathered and stored before any freezing weather. Any remaining should have their tops pulled off; after being pulled, be dried a little, packed down in sand and stored in the vegetable cellar.

Cabbage.—Keep them growing as long as safe from hard freezing. The cabbage hardens up and matures the head considerably after cool fall weather, unless already mature, when they should be gathered, as they will crack and commence a new growth unless pulled. Keep the cabbage and cauliflower plants, sowed for wintering, cultivated and protect, or remove into cold frames upon the advance of freezing weather.

Celery.—Remove decaying leaves, and finish up the earthing and blanching processes, preparatory to removing the winter's supply into the cellar before frozen in.

Cold Frames.—Have these in readiness for immediate use, as wanted. Recollect these are frames similar to hot-bed frames, only the glass is laid on more nearly level, and the bed constructed without manure, and are used for protection, not for forcing.

Grapes.—Where grapes are designed for wine-making they should be thoroughly ripened on the vines. On my vines I have this season found the *Procris Americana* quite plenty, and as early as the last of June the larvæ were full grown. These I caused to be destroyed as soon as discovered, so that they damaged my vines but little, and I think there were none left for another season; so, if my neighbors have done their part, another season will see them "beautifully less." The Satellite Sphinx also made its appearance, but for all I had a very nice crop of Delawares, Concords and Hartfords.

Insects.—Aside from those on grapes, we have had a worm on strawberry vines which has damaged them considerably. I have failed to discover them in any previous season. This worm is the larvæ of the strawberry Saw-fly—*Emplytus maculatus*. In *Hearth and Home* for September 3, Prof. A. S. Packard, Jr., has an article describing this insect, in which he says they are readily distinguished from

caterpillars in that they have "a greater number of feet (twenty-two) than the young of butterflies and moths, which have, at most, eighteen pairs," and for which they are sometimes mistaken.

LETTUCE.—Seed may still be sown in cold-frames. Remove that sown last month into the frames just before severe weather, or it may be protected with clean litter that will hold snow to help protect; but it should not be used where water will be liable to stand and freeze.

PARSNIPS.—These are best left in the ground through the winter to freeze and sweeten. A few may be packed in sand in the cellar, if wanted for winter use.

SPINACH.—Thin out the young plants where necessary, and give slight protection before hard frosts. This is best wintered same as cabbage plants.

Do any trenching, draining, &c., needed, and do not forget to add to the compost heap everything that can be converted into plant food. Manure, good seed and culture are the three essentials to growing vegetables or any crop. W. H. WHITE.

South Windsor, Conn., 1870.

For the New England Farmer.

WORMS IN HORSES.

A writer in the FARMER wishes to know "what will destroy worms in horses." Having tried other remedies without success, I gave my horse, more than one year ago, two doses of linseed oil, one pint at a time, on succeeding mornings, and he has not been troubled with them since. Try it. Writing of worms reminds me of a fact related to me recently.

Shall "Worms Destroy this Body?"

A relative, having occasion to take up the bodies of two children buried about three years previous, found the coffins in a good state of preservation, but, on opening them, discovered the corpses to be only a mass of crawling, small, white worms, one-half inch or more long! As the coffins were perfectly tight, it is a question where the worms originated,—in the body, or from germs in the air inclosed in the coffin.

Hair Snakes.

A young man found, last week, a hair snake in his milk pail, and wondered where it came from. I told him there must be a cricket in the pail. He turned off the milk and found the cricket, as I said. These snakes come from crickets.

An Egyptian Plague.

The present season will be remembered, not only for the hot weather, but also for the plague of flies. Having tried various remedies offered by the fly physicians, and the matter growing no better, but the worse rather, I set up the old-fashioned fly trap with much better success. Every clap of this *mitrailleuse* brought down scores and hundreds at once, but perhaps the usual crowd of mourners or substitutes will follow. These pests have been so annoying to cattle, that in some instances I have noticed the skin had cracked open and was peeling off the fore legs of some cows.

About Coloring Butter.

Butter-makers who are not so fortunate as to have a supply of that "meanest of fodder," —as Dr. Loring calls it—sowed corn, find it necessary, (on account of the drought,) if they would receive the best price for their butter, to color it. This is commonly done by the use of carrots, but some use annatto. The latter is used by all cheese-makers in the manufacture of cheese, and in a conversation with Mr. X. A. Willard, who is high authority in dairy matters, he said, since the demand was for yellow butter, there was no objection to the use of annatto for coloring butter, provided a pure article was obtained and used in right proportion. Why should it injure butter any more than cheese? "Annatto," says Mr. Willard, "is made from the seeds of a plant which grows in Brazil. The pure article in mass is of a dark red color, not bricky, but of a clearer shade. It has a taste and smell like the extract of licorice. The dark, black looking should be avoided."

For three ten-quart pans of cream, take a piece of annatto about the size of pea, dissolve it in a little warm water, and pour it into the cream when you begin the churning. Those who try this method with success will not be likely to grate carrots longer. A writer in the *Rural New Yorker* say, "Carrots contain large quantities of nitrogen, and the use of them for coloring butter is *very dangerous*."

Dairy Prospects.

The drought being so severe and general over the whole dairy regions, dairy products must advance in price. If farmers will hold their butter and cheese till cool weather, they will realize better prices than they have received for some years,—at least, so thinks

Essex, Vt., Sept., 1870. ROY.

VITALITY OF SEEDS.—In some remarks on this subject, the *Ohio Farmer* says, a gentleman, upon whom we can rely, tells us that in early times, there was a wagon road through a certain piece of thick hemlock woods, in Ashtabula county, over which hay was drawn from one farm to another. Afterwards, this road was abandoned and shut up, and forty years later the forest cut down; and as soon as sunlight came upon the earth here, a beautiful growth of timothy came up the entire length and breadth of the old road. It is stated that people acquainted with this circumstance generally believe that the hay seed scattered there nearly a half century before retained its vitality.

LIGHT "BRAHMA" FOWLS.

The fine stock of Chinese poultry, of which the above illustration gives a very good general idea, on account of its great size and uniformity of characteristics in color, form, and approved good qualities, is now being largely bred all over the United States and in England, and is deservedly popular.

We have published annually, for some years past, a detailed statement, by James Buffington, of Salem, Mass., of the expense of keeping a flock of Brahmas, and of the income from the sale of eggs and chickens. Not long since we also published an article, by our intelligent correspondent, A. W. Cheever, entitled, "The Brahma Fowls—Why I keep them and how I manage them," which shows the appreciation of these fowls by practical poultrymen. The large prices which both the "light" and "dark" varieties commanded at late poultry exhibitions in New York, and at Worcester, Mass., are further evidence of the continued popularity of this race of domestic birds, and it is claimed for them that of all the Chinese varieties these are the hardiest, the best layers, and the heaviest at maturity. They lay large eggs and a good many of them; but they are generous feeders. The hens are excellent mothers, and the chickens rear easily, though they at first feather slowly.

After alluding to the unsettled question of the origin of the Brahmas, Mr. Wright, the author of an English work recently published in this country, entitled, "The Practical Poultry Keeper," says:—"But one thing

is certain: ever since this magnificent breed was introduced, it has steadily become more and more popular, and is now one of the most favorite varieties. To prosper thus in the absence of any poultry 'mania,' a breed must have real and substantial merits."

From the same work we copy the following description of the breed: — "Their most marked peculiarity is in the comb, which is totally different from that of any other variety. It resembles *three* combs pressed into one. In a first-class cock, the effect is such as would be produced were a little comb, about a quarter of an inch in height, laid close to each side of his own proper comb, twice as high, the centre one being thus higher than the others. Each division of the comb ought to be *straight* and even, irregular or twisted combs being serious faults in a show-pen. In the hens the comb is very small, but the triple character should be equally evident, and the formation is quite plain even when the chicks first break the shell."

IMPROVEMENT IN CURING CHEESE.

We copy from the *Utica Herald* the following notice by our correspondent, L. N. Brown, of Edmeston, N. Y., of an improvement in the process of curing cheese, which he thinks may be advantageously adopted by all cheese-makers. He says:—

While travelling among the cheese factories in Madison County, recently, I visited the Smith Valley factory. This is a fine factory and managed by Mr. Gritman, a man of sound experience, who has had charge of it for the past three seasons. Mr. Gritman's dairy is uniform in character, and the cheese are all very fine; in fact, this is the only factory that I have visited this year that did not show the effect of tainted milk.

One feature in the management of this factory is worthy of notice. This is leaving a press cloth on the ends of the cheese while curing. The cloths they used were square,—I would prefer round ones. After the bandage is drawn on, place on the end a round cloth the size of the cheese, then a square press cloth as usual. Put on the hoop and turn the cheese, then place another round cloth under the follower. When taken from the press, leave the round cloths until the cheese goes to market. These are then taken off and cleansed in boiling whey, which renders them fit for future use. The same cloths will answer for years.

The following advantages result from this plan: The cheese require no grease. They are free from cracking. They do not adhere to the counters. They take much less rubbing and care than they would if treated in the ordinary way.

NEW PLAN OF SETTING MILK.

The present season I have adopted a new plan of setting milk for butter, which I think is a very great improvement on the old method, and one which, I think, as it comes to be better known, will be in general use. The method is this:

Each milking is put into a single tin vat, made of the heaviest cross tin. The vats are 28 by 40 inches and 14 inches deep, with a one-eighth inch wire around the top, and handles at each end. These vats set into water-tight wooden boxes, with an inch space on the bottom and three inches on the sides for cold water. I use water from a well at a temperature of 48°. If one has running water it would save labor. Five vats are necessary, and with this number milk can be kept 48 hours and have one vat ahead ready for use, or 60 hours if skimmed just before using. The wooden boxes are of clear inch pine, painted inside and out, the vats painted on the outside. I am milking 20-cows and heifers, and find that they seldom fill the vats over eight inches deep; so I conclude that vats the size of mine would do for a 20-cow dairy, as I have learned that cream will rise as well when the milk is 10 to 15 inches deep, if *kept at the right temperature*. My tin vats cost $4.50 each, my wooden ones $3; total cost, including painting and metal fawcets for drawing off the water, not quite $40.

Now for the advantages: it is much easier straining the milk; is not over one-third the labor to skim and wash the vats; the butter is of better quality, (I have not seen a "white cup" thus far;) and when the mercury is up among the *nineties*, as it has been for weeks together this season, more butter can be made. On this latter point I cannot yet speak definitely, but if I only make as much as by the old method I *shall be well satisfied*. It *pleases the women*. There is not a stack of 30 to 50 rattling tin pans to be skimmed, washed, scalded, and aired, but a single pan which can be skimmed, emptied and ready for use in 20 minutes.

In this neighborhood there are four dairymen, owning 120 cows, using these vats, and others will do so next season. There is no patent—no farm rights to be paid for—and all who choose can use them —*J. S. W., St. Lawrence Co., N. Y., in Country Gent.*

—The Spaniards have a maxim that a man is ungrateful to the past generation that planted the tree from which he eats fruit, and deals unjustly toward the next generation, unless he plants the seed that it may furnish fruit for those who come after him.

IMPORTANCE OF HOEING.

AFTER the farmer once begins to get the hay crop, that business is apt to take precedence of all others. The crops which ought to be hoed, and which have been tended with care up to this time, are neglected, and they become foul with weeds, some of which are likely to go to seed and thus infest the soil for many years to come. In addition to this evil, the surface of the soil becomes hard and crusty, so that the fertilizing action between the soil and atmosphere is greatly interrupted, and, consequently, the growth of the crop is retarded.

Soon after haying, the small grains require attention, and thus the corn, potatoes, and root crops are too much neglected.

The labor of destroying weeds on the farm, through an ordinary lifetime, is, in the aggregate, immense. Like the rolling stone of Sisiphus, which always went back again the moment he got it to the top of the hill, so it is with the weeds. One crop begets another, and new kinds are introduced, until our soils are crowded with spurious plants which are a burden and a plague.

The farmer cannot afford to let them grow among his cultivated plants, because they exclude light and heat from them, and in a general way impoverish the soil.

There are several ways by which we may greatly prevent their increase. The first is by the most thorough destruct on of them *this* season. Even at the postponement for a time of some other things, do not allow a weed to ripen, and thus increase its kind.

In order to succeed in the destruction of weeds, we must not rely too much upon the hoe. Where they have become rank there is nothing so efficient as the hand. Tear them out by the roots before the seeds are matured sufficiently to germinate, and then it will be safe to throw them into the hog-yard, or under the cattle or horses in their stalls. If the seeds are formed, and would probably sprout under favorable circumstances, throw them into heaps, and burn them when dry, or allow them to pass into a high degree of fermentation; high enough, at any rate, to destroy the vitality of the seeds, without regard to the value of the plants as manure.

In using the hoe, we generally go forward, and many of the weeds are pulled out of the soil, brought towards us, then trodden into the loose earth, and are thus in condition to grow again. Fields are sometimes seen covered with a dirty growth of various kinds of weeds, hoed out in cloudy weather, where one or two roots only, perhaps, were buried in the soil, and just enough to keep the weed alive. The second hoeing is more expensive, and vastly more disagreeable in such a field, than the first was.

Some implement should be used that will lift the weeds out of the soil and drag them a little on the surface before leaving them. In this situation the sun will wilt them, if the day is clear, so that they will not revive. They are then of some value to the soil.

For this purpose, the Wheel Hoe is an excellent implement. It not only leaves most of the weeds on the surface, but the operator can run with it close to rows of plants where they are in straight lines, and can accomplish more work and *do it better*, than three men can with common hoes.

Another mode of preventing an increase of weeds, is, to cut grass where white weed and other obnoxious plants are mingled with it, before the weed seeds are matured. This will be the best course, even at the expense of some loss in the grass crop.

Thousands of acres in New England are overrun with sorrel, white weed, dock, or some other weed, where they are allowed to stand until one-half of their seeds are so far matured as to grow again when applied to the land, mingled with manure in the spring.

Most farmers collect a heap of materials through the summer and autumn to be used as a top-dressing. This heap is likely to consist of a variety of green plants, sweepings of the barn, loam, muck, and all quickly decomposing materials that can be obtained. There is danger lurking in such a heap, and it is better to let it pass into a high degree of fermentation, by an occasional moistening and turning over, than to run the risk of sowing millions of seeds, to throw up millions of obnoxious plants. The loss of manure by undue fermentation will be trifling compared with the damage done by sowing the seeds of rank, troublesome and worthless plants.

For the New England Farmer.

COST OF A SMALL CHEESE FACTORY.

The following article has been kindly furnished us by Mr. L. N. Brown of West Edmeston, N. Y., at our request. It not only answers the inquiries of our correspondent, H. M. Fales, but will be read with deep interest by all dairymen. Mr. Brown's experience as a practical cheese maker, and his extensive acquaintance with building and furnishing Cheese Factories, entitle his opinion to due consideration. The Morning *Herald*, published at Utica, N. Y., says "Mr. Brown has planned and furnished more factories than any other man in the State."

MR. EDITOR:—According to your request I will briefly answer Mr. H. M. Fales, in regard to the probable cost of a small cheese factory. The tendency now is to small factories. They are built less expensively than formerly, and mostly by stock companies,—the patrons that furnish the milk taking most of the stock. For 100 cows, a building 60x26 feet, with 16 feet posts, making it two stories, would be required. Take 24 feet from the lower story for a "make room," leaving the remainder and the upper story for "curing rooms." The upper story should be partitioned the same as the lower. The 24 feet room over the make room should be plastered and furnished with stoves suitable for curing early and late cheese. The cost depends upon the price of lumber and labor, which differ in localities. A rough, substantial building which will answer in every respect in most localities, would cost $1000. If finished with paint, &c., $1300. It could be furnished with vat, tank, presses, hoops, scales, &c., &c., for $300, making in all $1300 for rough building, and $1600 for the finished one.

For 200 cows, the same sized building would answer. For vat and fixtures, $500, making in all $1500 for rough, and $1800 for finished building. This is the size of many that were built in this State this season.

Stock companies are formed by those interested taking one or more shares, which may be $50 or $100 each. A committee is chosen by the share holders, who superintend the building of the factory, hiring the help, &c.

A dairy of 100 cows can be managed by a man of experience, without additional help, who could be hired at from $2 to $3 per day and board. For 200 cows he would want an additional hand, which might be a woman, and inexperienced.

The question is often asked, How many cows must a factory number to pay? For an individual to build a factory to work up milk for others, at $2 per hundred, which is the common price of making and furnishing the cheese all boxed and ready for market, he would want 300 cows or more to make it a paying business. As with an individual, so with a stock company, to make the stock pay good dividends. But by the plan given, the farmers build the factory themselves for the purpose of working up their own milk, which is a great saving to them over the old way, both in *expense and quality of cheese*. If the price named above will not pay as good interest as is just to the stockholders, the price of making should be advanced. As the patrons are the owners of the factory, they can always fix a price that will do justice to all parties.

I have used various kinds of apparatus. For small factories, I fully agree with Mr. Willard, whom you justly quote as "authority in these matters" that the "Oneida" or "Ralph Vat" is the best in use.

Those desirous of building, will find T. D. Curtis's "Hints on Cheese Making" valuable. It gives measurement of presses, &c., and much information in general. It will be sent by mail by addressing "Utica Morning Herald, Utica, N. Y." Price 60 cents.

L. N. BROWN.

West Edmeston, N. Y., July 30, 1870.

For the New England Farmer.

MEDICAL TOPICS.

BY A MEDICAL MAN.

Cholera.

The term *Cholera* signifies an affection attended by vomiting and purging. If the matters ejected consist of undigested food, or of bile; and if the case occurs independent of any epidemic influence, and is evidently a mere effort of nature for the removal of offending substances from the system, it is called *sporadic cholera, bilious cholera*, or in popular language, *cholera morbus*. If the disease prevails as an *epidemic*, that is, if it affects many persons at the same time and in the same neighborhood, and if there is a tendency to collapse, with violent and painful muscular contractions or cramps, &c., it is called *epidemic cholera, spasmodic cholera, Asiatic cholera*, &c. If the subject affected be an infant, and if the disease be caused by dentition or teething, or by indigestion, impure air, &c., it is called *cholera infantum*. But we will describe these three varieties of cholera more particularly.

1. Sporadic Cholera, or Cholera Morbus.

This affection usually comes on suddenly, although it may be preceded by a sense of weight or uneasiness at the stomach, with nausea and occasional cholic pains. The attack occurs much oftener in the night than in the day time, and is ushered in by vomiting, which is speedily followed by purging, and these continue to recur in quick succession, or simultaneously, until relief is obtained. Severe pains, like those of spasm or cramp, often attend the act of vomiting, and in severe cases

the spasms of the muscles of the abdomen, feet and legs are very distressing. Hiccup is an occasional symptom. The pulse is more or less accelerated, small and feeble. The skin is cool or cold, and is sometimes covered with clammy sweat. The voice is feeble, and sometimes lost, and there is anxiety, restlessness, and a sense of exhaustion proportionate to the violence and duration of the attack. This disease runs a rapid course, the patient generally recovering. Occasionally, however, a state of collapse comes on, and death takes place within a few hours from the date of the attack.

The causes of sporadic cholera are various. An elevated temperature, doubtless, has some agency in causing it, for it occurs much more frequently in hot weather than in cold, and prevails most in warm climates. Children, youth and middle-aged persons are more liable to this affection than are those in advanced life, and males are more often attacked than females. Unripe fruits and vegetables, uncooked or improperly cooked food, and an immoderate indulgence in the use of cold drinks of any kind, are the most common exciting causes; but it is probable that in some cases a special cause is involved, the nature and source of which are not known. The treatment of this affection should vary somewhat, according to the particular circumstances of each case. If there is reason to suppose that the stomach contains undigested food, the vomiting may be encouraged by administering large draughts of warm water or a moderate dose of ipecacuanha, or some other mild emetic. Usually, however, the contents of the stomach are expelled by the first acts of vomiting, and an emetic is not called for. The object now is to arrest the vomiting and purging, and also the pain; and the most effective remedy for this purpose is opium, or some one of its preparations. One-fourth of a grain of opium, or ten to twenty drops of laudanum may be given and repeated every half hour, until relief be obtained; or, what is better, half a grain of sulphate of morphia may be placed dry upon the tongue, immediately after vomiting. If this be quickly rejected, a second dose should be given without delay; and if a second and third dose be rejected, the administration by the mouth should be abandoned, and a teaspoonful of laudanum, mixed with a little starch, thrown into the rectum, to be repeated every half hour until the vomiting and purging ceases. The injection of a solution of morphia under the skin is at present, a popular practice among physicians, and a very successful one too.

A highly important part of the treatment of this disease consists in witholding from the patient all liquids, with the exception of a tablespoonful of ice water occasionally, or, what is better, a small piece of ice. If spasms or cramps occur, brisk frictions with hot dry flannels should be resorted to. Great care, as regards diet, will, in most cases, be required for some time after the disease has been arrested. The food should consist of the lightest and most easily digested articles.

2. Epidemic, or Asiatic Cholera.

This disease seems to have originated in India, and to have prevailed there for a long period. It commenced its march from Bengal in 1817, and during the fifteen years following, it traversed nearly the whole of the known world. It visited the American continent first in 1832, and again in 1834. In 1847, it began its march a second time from India, and again travelled over the greater portion of the world, visiting the United States in 1849, '50, '51, and '52. Since then it has occasionally prevailed to a very limited extent.

The development of epidemic cholera is, in most cases, preceded by diarrhœa, more or less severe; but this is not always so. The disease is characterized by vomiting a watery liquid, free from any admixture of bile; by copious evacuations from the bowels of a thin liquid, resembling rice-water, and by violent and painful muscular contractions or cramps of the abdominal walls, feet, legs, and sometimes of the arms, hands and face. If relief be not obtained speedily, a state of collapse comes on, in which the pulse at the wrist becomes extinct, and the blood stagnates in the veins, giving a purple hue to the fingers, lips, face and surface of the body generally.

This variety of cholera is exceedingly fatal; but few of those who suffer from collapse recover, death taking place, usually, within a few hours from the advent of the disease. A special cause is, doubtless, essential to the production of Asiatic cholera; but this special cause, whether it be a contagious or an infectious material, does not, in most cases, produce it independently of other agencies. Intemperance, improper food, want of sleep, over-exertion, depressing emotions, filthy apartments, an obstructed perspiration, &c., are powerful exciting causes in a large majority of cases.

The treatment of this affection is divided into that which is proper during the premonitory diarrhœa, and that which should be adopted after the occurrence of the attack. To check the diarrhœa, opium, laudanum, and morphia, as recommended for cholera morbus, with the addition, perhaps, of tannin, kino, or some other astringent, are the best remedies. If the diarrhœa be not arrested, and the disease becomes fully developed, the same remedies should be continued, with the addition of stimulants, such as comphor, ammonia, brandy, &c.; and if collapse comes on, external warmth, by means of hot blankets, or bottles of hot water placed near the body, and the application of mustard to the chest and abdomen, should be resorted to as auxiliaries to the treatment above recommended.

3. Cholera Infantum.

This is a disease of infancy and early childhood, the subjects being chiefly between the ages of four months and two years, or about the period of the first dentition. It prevails as an epidemic in all the large cities during the season of the greatest heat. In the country, it generally occurs in a sporadic form, although it sometimes becomes epidemic. It generally begins with a profuse diarrhœa, the discharges being very thin and light colored, green, or yellow. The stomach soon becomes irritable, and rejects every thing that is taken into it. Great languor and prostration come on speedily, and extreme emaciation takes place rapidly. The tongue is covered with a white, slimy mucous, the skin is dry and harsh, the pulse is small and quick, the head and abdomen are hot, while the extremities either retain their natural temperature or become morbidly cool. There is great thirst, but whatever liquid is taken is quickly rejected. In most cases there is considerable fever, especially towards evening, and the child suffers more or less pain, as is indicated by fretfulness, low moaning cries, frequent change of posture, drawing up of the knees, and occasional acute screams. The abdomen is often somewhat enlarged, and tender to the touch, and occasionally the patient becomes delirious. Death sometimes occurs within twenty-four hours of the first appearance of the disease, but in a majority of cases the sufferings are more protracted.

The causes of this affection are a heated, confined and impure atmosphere acting directly on the skin, and indirectly on the mucous surface of the stomach and bowels, assisted, oftentimes, by over-feeding or improper feeding, and these causes are rendered more effective by teething.

The treatment of cholera infantum should consist in placing the patient in a clean, dry, and well-ventilated room, upon a mattrass or a folded blanket laid upon the straw bed; in covering the body with a soft, dry flannel; in administering a warm bath once or twice a day, to be followed by gentle friction over the whole body with the hand or a soft, dry flannel; in dividing the gums, if they are swollen and hard; in giving very small quantities of iced water, or of cold, mucilaginous drinks; in improving the character of the secretions by small doses of aromatic syrup of rhubarb, or equal parts of tincture of rhubarb and chalk mixture; and in supporting the strength by a weak punch of brandy and milk, with or without sugar, as the stomach will bear it best. When the vomiting is persistent, physicians frequently give small doses of bismuth and pepsin, in equal parts; and if the disease becomes chronic, tannin, oak bark and other astringents may be employed. The diet should consist of boiled milk, with or without wheat or rice flour, as may best suit the case, boiled wheat flour, arrowroot, and such like articles.

For the New England Farmer.

USE OF MUCK AND DRY EARTH.

Since I last wrote to you, I have often been prompted to give some bits of my experience, as from time to time I have perused the columns of your excellent paper, but pressure of other matters have prevented, and it is quite possible that all concerned are as well or better off for my silence. It occurs to me just now that you may not be so crowded through the busy hay season, as you are at some other times, and feeling like writing, though my gun is not loaded for any particular game, having almost forgotten the various topics that have been presented from time to time, that I wished to have my say about, I will begin with muck.

Many farmers are interested in the muck question. I have dabbled in it some for several years, keeping my hog yards, which are in the barn cellar, under the horse stable, supplied with it the year round, putting in as much of it dry, or partially dry, as possible. I also use it for my cattle yards and for bedding stock, &c. For this purpose it is necessary to have it quite dry, and I have found it difficult to dry it while it lays on the ground, even though the land is dry. I believe it pays to build a floor raised a few inches from the ground beside the pit from which the muck is to be taken, and shovel it first on to that when the weather is pleasant. It will dry much faster than if it remains where it can absorb moisture from the earth.

I am confident that we do not take so much pains to save the liquid dropping from our cattle as we ought to. If we cannot procure muck or leaves and mould from the forest, sawdust will make an excellent substitute, provided we do not throw the manure out to be washed by storms before we apply it to the land. The last autumn was wet and winter set in before there was much chance for getting leaves, and I found it very convenient to use sawdust. My manure was in very fine condition to apply to the land. Spring opened early giving farmers a chance to commence spring work about the middle of April. Consequently the crops were generally got in in good season, and for once we have been able to get our hoeing done so as to commence haying in June. The prospect now is that we may get our hay this year before it is so hard that the cattle cannot eat it comfortably.

Farm crops all look well. Corn especially is forward and of heavy growth for this time of year.

I see by looking over my scribblings that I have neglected to mention one place where I am very particular to use dry muck, and that is the vault of the privy. Since it has been demonstrated that such places can be kept

wholesome by the use of dry earth, that can be gathered so easily in dry weather on our country roads, and in just the proper condition to use, it seems to me that our corn fields may be greatly benefited from this source. When people once try the experiment I am sure they will never abandon it, but will conclude that it is better to save carefully everything that will increase the fertility of our farms than to buy fertilizers, paying more than we can get out of them. W. I. Simonds.

Roxbury, Vt., July 10, 1870.

For the New England Farmer.

SWELLED JAWS AND THROAT IN SHEEP.

Messrs. Editors:—It is not an easy matter to give a definite or satisfactory answer to your "Subscriber's" inquiry from *North Haven, Maine*, in regard to the mortality among sheep in that locality, from what he terms "swelling of the jaws and throat." The account given of the symptoms of the malady is quite too limited to admit of anything like a clear or intelligent conclusion upon the question.

The only answer which, under the circumstances, can be given, as I conceive, is to state, in the briefest possible space, the general facts in regard to those diseases which attack those parts of the sheep's system, with such directions about treatment as have been found most beneficial in judicious hands, and leave your "Subscriber" to infer for himself whether the difficulty to which he alludes comes into this catalogue, or whether some new form of disease may be manifesting itself among the flocks in his locality.

In the first place, then, swelling is the result of inflammation, and inflammation about the jaws or throat of the sheep is almost always confined to the loose (cellular) *tissue*, which lies immediately beneath the skin, between and around the muscles, and which forms the framework, like honeycomb to the honey, of all the fatty portions, or to the *glands*.

But an inflammation of the cellular tissue alone is an occurrence so rare, and so harmless in its results when it does occur, that it may be left out of this account entirely. In all probability then the seat of the disease to which the gentleman refers is in the glands about the mouth and throat of the sheep.

Whenever inflammation attacks the glandular system in any part of the animal organization, it usually spreads with great rapidity. Just what the mischief is that is thus wrought in the system, whether by this sudden interference in the natural working of the glands some effete matters by being retained in the system act as poison, or whether by this rapid inflammation a portion of the glands suppurates, and thence sends out pus to work its results in the organization, no man can tell. Whatever the nature of the disease, or whatever the agencies through which it works, it seems to generate a poison, from the effects of which the animal generally dies speedily. I have seen several instances among sheep, and recently one case of the same nature in a horse.

The fact that the animal dies, is about all the definite and certain knowledge we have of the matter. Hence the best treatment to be applied to such cases, is the question which most interests the flock-master.

When the animal is first attacked, you notice a disinclination to feed, or, if it tries to eat, it is with difficulty. Hay is only partially chewed, and falls from the mouth. The food is *mumbled* rather than eaten. The jaw is moved as though each motion produced pain. The eyes grow dull, and the animal finally refuses to try to eat.

If you examine the patient, you will find the parts between the jaws and underneath the tongue have become swollen. This soon extends down upon the sides of the neck, and finally up upon the sides of the head and face.

In twenty-four or thirty-six hours, if the wool is opened, the skin will be found to be discolored, mortification has commenced, and the animal is soon dead.

Now, if the patient was a man, the treatment would be plain and simple. Warm applications to the swollen parts, and tonics and good food for the stomach. But with a sheep little can be done, and generally because we do not find out the mischief till it is too late to cure, or even palliate the malady. There can be but little doubt that the disease is contagious among sheep, and probably among horses, though it is not what is generally known under the common name of "horse distemper." The first thing to be done then is to take the animal away from the flock as soon as it is attacked, and *keep* it away in another barn, if possible, the farther the better and safer for the rest. Give it plenty of fresh air and sunlight; shear the wool closely from the affected part; make a hop-poultice, and spread it upon a cloth long enough to reach from the nose down to the brisket, and wide enough to come well up on the sides of the neck. To the edges of this cloth sew five pairs of strings, one to be tied between the eyes and nose, one between the eyes and ears, and three upon the neck. Let this be changed as often as it gets cold. Give a pint of good oat meal gruel, into which you have put two teaspoonfuls of strong ginger and a gill of whiskey, every six hours, and if you lose your patient you will have the consolation of knowing that you have given it the best treatment that experience could suggest.

If a swelling occurs, which is *not* attended by mortification, or which does not result in that, careful search should be made for any abscesses that may be forming about the parts, and when any *soft* spot is found, it should at

once be punctured with a sharp knife. If the the abscess be a large one, or there be several of them, apply the same poultice as recommended above, and the same general treatment, modified by the mildness or the severity of the disease.

Hoping that your "Subscriber" will find here, at least, the evidence of an effort to produce something to meet his case, I am, gentlemen, truly yours, SHEPHERD.

For the New England Farmer.

FARMS AND SCENERY IN NEW HAMPSHIRE.

In the hilly town of Guilford, beneath the shadow of Belknap mountains, and overlooking sweet Winnipiseogee, I have pitched my summer tent, or rather domesticated myself for a time within the household of one of the "oldest settlers." On his farm is the foundation of the first log hut built in this locality, and he relates a story of the time when, the fire on the hearth going out, the housewife footed three miles in the wilderness, to the next neighbor, for living brands to rekindle it. Out in the orchard is a small graveyard, containing the remains of grandparents and other relatives. Many of these rough farms have their burial corner, which was established when neighbors were few and far between. Where strangers possess the old homestead or where the young people have deserted it, these burial places suggest painful reflections.

Deserted farms are frequent in this part of the State. The old folks obey the decree of inexorable Time, and the young folks finding farming among the rocks unremunerative drudgery, adopt other employments, or leave for the West or California. These rugged hills have reared a race of men of clear heads and warm hearts and stalwart forms. They go forth realizing the responsibilities of life; examples of endurance, uprightness and independence. They have learned from these eloquent hills the precepts of patience, content and charity—that nothing lives in or for itself—and these teachings follow them throughout life.

To Adolphus Don Carlos and Arabella Daffodowndilly, with romantic and extravagant ideas regarding "love in a cottage," and "summer residences," the cheapness of farms are a constant surprise. The land only is really sold,—the house and out-buildings are thrown in. This farm of 150 acres of pasture, woodland, orchard, and cultivated fields is worth three thousand dollars. That farm near by of eight acres, with a good two-story house and barn was sold last autumn for $350. Another farm a mile away, containing 1000 acres of which the middle Belknap mountain forms a part, is worth between $3000 and $4000. It has a roomy cottage, well kept and painted, convenient barns and shed, surrounded by meadows, maple groves, waving fields of wheat, corn, &c. But still there are valuable farms in this vicinity. Mr. G. W. Sanders in Guilford, bought nine years ago his farm of 150 wooded acres, bordering on the Lake, for $18,000. The first year he cut lumber enough to *pay for it*, and the next year as much more. That was, and is still, a profitable farm. The land is the best I have seen in this vicinity. Mr. Sanders evidently understands farming and makes it something more than a drudgery.

I wish there could be a law concerning fences. In no other State can there be worse fences than one finds in this part of New England. Such promiscuous outlines of stone walls—such battered and infirm boards, nailed as if affected by lunacy, to ancient, crumbling supports!—and this in a country where stones grow all the year round. In numerous fields, little heaps of stones are piled a few feet apart, and year in and year out the farmers plough around them and mow about them, when an ox-team with a leisure afternoon could clean every stone into a corner and make the fields more valuable and beautiful. Farmer John could erect his own monument, as some farmers of Princeton, Mass., have done, in walls from five to fifteen feet broad, and level and true. Another unpleasant feature are the old orchards, filled with gnarled and dead-limbed apple trees, a protest against good fruit, cumberers of the soil, blotches on the landscape, and a bad example of farming. The young farmers do not care so much for posterity as did their fathers.

From Belknap mountain, the view of the lake and mountains is more attractive than from Red Hill, where the finest survey of the country is obtained. Standing midway in the curve of Winnipiseogee, from the summit, the enraptured eye sweeps over a landscape hundreds of miles. Northeast we look straight ahead 150 miles. On a clear day, shipping can be discerned in Portsmouth harbor. All the mountains of New Hampshire are comprised in the view, many of them flattened at the altitude of hills from which we observe them. Every one of the White and Franconia mountains can be distinctly counted,—Mt. Washington being ever an isolated feature from every point of observation.

Lake Winnipiseogee is about thirty miles long, one to seven in breadth, and lifts itself 500 feet above the sea. It contains 365 islands, 272 having been surveyed. Some of these are thoroughly subdued by cultivation. Davis' island—where we spent a day with a merry picnic party—contains over eleven hundred acres, which compose two farms. Over sixty years ago, a Mr. Davis gave his reckless scapegrace of a son this island with conditions that he should live on it. It was then heavily timbered and worth a hundred or two. It has been sold several times for $12,000 although most of the timber is gone. This son died in 1843, aged 79, and is buried in a little lot on

the island, and there also rests his two wives; several of his children are also buried there. His second wife died in Norfolk, Virginia, two years ago, and her body was brought here for burial beside her husband. It is a peaceful little spot—this tiny graveyard! The eternal hills cast their shadows there, and the waters of Lake Winnipiseogee unceasingly lap the shores with soothing murmur, yet quiet and undisturbed they sleep the sleep that knows no waking.

Brown's island close by, is much larger and has a number of farms upon it. A hotel has been kept there, but it is now abandoned, as it did not pay. Just below, the little steamer Chocorua is gliding behind little Diamond island. There is a small house situated on the verge of the isle and this is a hotel. What are the attractions of the isolated and tiny island. I do not know; but fishing doubtless, for Winnipiseogee is monopolized by the finny tribes. Yesterday, the landlord of this lonely hotel was conveyed to Concord for burial. No isolation can preclude the search of Death.

Vegetation is loudly crying for rain. The wells and streams are drying up, and the earth is fairly baked. Susie Vogl.

Guilford, N. H., July 28.

For the New England Farmer.

THE PRIZE RING.

The State of Massachusetts and other States of the Union, annually make liberal appropriations to encourage agriculture, horticulture, and the mechanic arts. These appropriations are put into the hands of directors who offer premiums at their discretion for objects more or less remotely connected with agriculture and mechanics.

Every generation grows wiser, and we have a plan to suggest to the managers of our Fairs, which, although it does not present a new subject, presents it in a new relation. The laws of the State prohibit certain practices, as horse-racing for premiums, prize-fighting, cock-fighting, &c., under heavy penalities. But these practices are all connected more or less directly with agriculture, and may be adopted as proper objects for agricultural shows, and thus the penalty of the law be evaded. The matter, so far as it relates to horses, has been settled, and the law has become obsolete.

It only requires a little reflection to see that the prize ring is quite as clearly related to agriculture as horse-racing, and that if introduced on to Fair grounds, it will draw quite as well as the horses, and at much less expense. The prize ring is an exhibition of muscle, endurance and pluck; qualities which all farmers need, and which are to be acquired by training. Surely in these effeminate days, anything that will induce our young men to cultivate muscular power, endurance and courage will contribute much to success in agriculture and mechanics. What would tend more directly to this result than to appropriate a part of the money granted by the State in premiums to those who would come up to time most promptly, and punish their opponents most severely in the ring? This would not only prepare men for hard work and great endurance in the field, but at the same time would cultivate the "noble art of self-defence," and would create a remunerative business for a class of men who should prepare and train the candidate for the honors of the ring. Those men, too, who should win the prizes would doubtless command the highest wages on the farm, and would be the models after which our young men would strive to form themselves.

There is no doubt that the Directors have the same power to make such appropriations as they have for racing and trotting, and we think there are honorable gentlemen in the community, who, from their love of agriculture, would offer premiums from their own pockets to the most successful entries in the ring.

If any person should object to this, let them reflect that it is a leading object with most Boards of Directors to get money into the treasury of the society, and that nothing will attract people like an opportunity to witness contests of muscular strength and endurance. Experience has proved this from the times when the games were celebrated on the Isthmus of Corinth, which brought together almost all the inhabitants of Greece. Here foot races were mixed with chariot races, and wrestling with boxing, both with the naked fist and the leaden cæstus.

This national gathering every five years, in Greece, was justified not only for its social and civilizing influences, but because the exhibition of the athletes and the contests in which they engaged tended to improve the breed of men. At any rate, these contests drew immense crowds to witness them, and the same result would undoubtedly follow at our Fairs, were they sanctioned by our Agricultural Boards and thus made respectable. We can think of no way by which our treasuries could be so speedily filled, and we trust our Directors will take the subject into serious consideration.

A class of very active and liberal men who spend their money freely, would then become interested in our agricultural fairs,—a class which have hitherto not given them their patronage. This will tend to make them more popular and extend their influence in behalf of agriculture.

It is the fashion to encourage intellectual culture. Perhaps we are carrying this quite far enough, to the neglect of the culture of the body. There are many reasons to believe that the race of pure Yankees is depreciating, not only in numbers, but in blood and muscle. Not only is the number of children annually

diminishing, but the examining surgeons under whose inspection a large part of our grown up young men have passed within a few years, tell us that but a small proportion of them have sound and vigorous bodies. Now what would tend more directly to improve the breed than a liberal and generous encouragement of the prize ring? PROGRESS.

Massachusetts, Aug. 1, 1870.

A WOMAN'S GARDENING.

I have been out looking at my garden this morning (July 7), and it did look so well that I thought I would write and tell you some of the things I saw there; and I take a greater pride in doing so, inasmuch as it was partly the work of my own hands. But now for what I saw in the garden.

I saw tomatoes in blossom, squashes with eight and ten leaves on them, quite large watermelons, cucumbers, citron and muskmelon plants, also a bed of beets that I think cannot be beat around here, being at least one-fourth of a yard high, a nice onion bed, turnips, Khol Rabi, cabbages of different varieties, and everything else that go to make up a well-stocked kitchen garden. As for the flower garden, I think it will compare favorably with almost any other about here. I will now tell you what my part of the work was. My husband thought he could not afford to make a hot-bed, so I did the next best thing. I took quite a large door that I had, and nailed laths around the edge, so that it would hold the boxes on it, and retain the moisture. I then made a great many little pasteboard boxes, and without putting any bottom in them, set them on it, and planted the various sorts of seeds in them; and when they were large enough to set out, I slipped them, dirt and all, out of the bottom of the box without disturbing the roots at all, and so there was nothing to hinder them from growing.

I started all the melons, cucumbers, squashes, cabbages, tomatoes and bell peppers in this way. The beets and onions, parsnips and carrots were sowed in the open ground the 2d day of May, the peas were sowed in April. Everything but the peas I planted myself, and I don't know as I am any the worse for it, unless perhaps I have a little more tan on my face and hands than most people care to have; indeed, one lady said to me the other day, "Why, I would not be tanned the way you are, for all you have in both gardens!" Poor woman, she was neither tan nor any other color, except a dead white, and that is a color I do not fancy, the more so as I carried that color in my own face too many years.

A certain amount of outdoor labor, or exercise, or any other name you have a mind to call it, is just as much a necessity (in my opinion) for a woman, as it is for a man. To be sure, they cannot do much, but still they should do something for exercise out of doors, and what better can they do, than to cultivate a few flowers, or even work a little in the kitchen garden, if necessary that they should. But almost all the women, seem to be afraid that some other woman will think "she is as tough as an Irish woman" (as a great many are fond of saying), or that she hasn't got ailments enough, or isn't delicate enough, or something else of that sort.

But I will not say too much, for I have been in the same boat myself—I used to think it would be impossible for me to work in the garden as I have seen others, but I must say that since I have tried it, I have enjoyed a greater degree of health than when I staid in so closely, and I really hope that others may be induced to try my remedy for ill health. Now don't say "the remedy is worse than the disease," for you will fail to convince me, for I know by experience that it is not. You will not only enjoy better health, but if you are a lover of flowers, you will reap a rich reward for all the labor bestowed.

In the garden flow'rets, neither scant nor few,
That bud and blossom, all the summer through.

—*A. B., Monroe, in Maine Farmer.*

TO DESTROY ANTS.—1. Pour, copiously, hot water, as near the boiling point as possible, down their burrows and over their hills, and repeat the operation several times.

2. Entrap the ants by means of narrow sheets of stiff paper or strips of board, covered with some sweet sticky substance; the ants are attracted by the sweets, and sticking fast, can be destroyed as often as a sufficient number are entrapped.

3. Lay fresh bones around their haunts; they will leave everything else to attack these, and when thus accumulated, can be dipped in hot water.

4. Pour two or three spoonfuls of coal oil into their holes, and they will abandon the nest.

5. Bury a few slices of onions in their nests, and they will abandon them.—*Western Rural.*

BARNS IN FRANCE.—The barns at present coming into use, are built of brick dove-tailed into each other, no mortar being employed—and the interstices, ample for ventilation, will not permit the entry of vermin. The form of the building is round, two or three stories in height, with zinc roof. I have observed a few days ago, an oat-bin, some two feet high, standing in a corner of a stable, and occupying but little space. It is filled from the top; the cover being secured by padlock. Outside is a graduated scale that marks the quantity of grain daily withdrawn, and forms a perfect tell-tale in the event of dishonesty.—*Paris Cor. California Farmer.*

FECUNDITY OF WEED PLANTS.

"One year's seeding
Is seven years' weeding."

SEEDS are undoubtedly designed as a blessing to man. They certainly make labor a necessity, for they are as tenacious of life as a cat that is required to be killed nine times before she is fairly dead!

Few persons are aware of the astonishing fecundity of most of the pernicious weeds which infest our farms.

In some countries, where large landed estates are held by single individuals, and whose incomes are very large, the most pains-taking investigations have been made in order to learn what a single weed plant is capable of doing in the way of propagating itself. We have before us some of the results of these careful investigations, and from which we learn that a single coltsfoot produces from 3000 to 22,500 seeds! The wild mustard, 8000 seeds from a single plant! The chamomile, 40,000; the Mayweed, 45,000; the burdock, 24,000; the red poppy, 50,000; the wild parsley, 6000.

All farmers have noticed the fine gossamer which surrounds the thistle seed which is borne up by the wind and carried aloft like a tiny car. In this way, from a single plant, 10,000 seeds have floated away on downy wings. Then there are weeds whose seed pods burst open with violence, like the common garden balsam, so as to scatter the seeds to a distance, where they will propagate new plantations of their kind. On the other hand, some plants have seeds supplied with delicate hooks to fasten in the soil; others, again, propagate slyly under the earth, as the crow garlic, which produces 700 offshoots a year.

The *Irish Gazette* states that the nodding poppy or cockle plant have lessened the wheat crop in that country by at least a tenth part of its value, and that "the weeds of Ireland cost nearly *six millions* of dollars a year!"

In England, experiments have been recently made to ascertain the influence which weeds have upon the growing crop. In one instance several acres were sowed; one acre was measured and not a weed disturbed in it, the other six were carefully weeded; the unweeded acre produced eighteen bushels and the weeded acres averaged twenty-two and a half bushels per acre. In another instance, the unweeded acre produced thirteen bushels of barley, and the weeded twenty-eight bushels. A third, with oats, produced seventeen bushels, and the weeded acre thirty-seven bushels!

Should not some legal action be instituted in a matter of so much importance to compel people to abate a nuisance that not only robs us of property, but of strength, and incidentally, of life itself, in many cases! Laws are put in force to prevent the spread of small-pox, and yet, if the toil, waste of strength, discouragement, and annual loss by the prevalence of weeds could all be followed out through their various influences, the weeds would show by far the largest army of martyrs!

Any reform in this matter, to be worthy of the name, will be futile until we can purchase pure seeds with which to sow our fields. The fault in this particular is sometimes with the farmer himself. He foolishly desires to purchase cheap seeds, and finds some seedsmen willing to oblige him. Seeds are thus mixed often for purposes of fraud, as illustrated recently in an article given on a similar subject.

In an examination made and reported to the *Croydon Farmer's Club*, England, it was found that as many as 1,920,000 plaintain seeds were contained in a single bushel of red-clover!

In other experiments, in a bushel of rye-grass there were detected no less than 204,800 weed seeds. In a bushel of clover seed, 312,000; of linseed, 304,640; all this was irrespective of dirt and particles of stone, which make cheap seed by far the dearest.

Let us urge, then, again and again, upon farmers, the importance of extirpating the weeds upon their own lands. It is useless for one to keep his fields clean, while his neigh-

bor's fields are foul and constantly re-sowing all the land within half a mile of them.

In some countries the legislature has interposed its authority for the destruction of weeds. If we mistake not there is a law upon the statute books of Massachusetts in relation to the Canada thistle. By a regulation in France, a farmer may sue his neighbor who neglects to destroy the thistles upon his land at the proper seasons, or may employ people to do it at the other's expense. In Denmark, there is a law to oblige the farmer to root up the corn marigold. In Scotland, there is an old statute which denounces that man to be a traitor "who poisons the king's lands with weeds, and introduces into them a host of enemies."

We need something, not only to compel people to keep their private lands free from weeds, but some provision that the destruction of weeds on the side of the roads should be effected by town or county authorities, and the expense become a common one. At least, *somethiny* may be done in this day of progress to prevent the enormous annual losses occasioned by weeds.

EXTRACTS AND REPLIES.

WHEN TO SOW RED-TOP,—WILL IT DO WELL ALONE?—SEED PER ACRE?—STUMP PULLER—HOW TO SWEETEN MEAT TUB.—EELS IN VINEGAR.

When is the best time to sow red-top? Would August be a good time? Will it do nicely alone without other grass seed? I would like to raise it for seed. How much seed must I sow per acre? Would it make a good hay crop, alone? If not what is the best kind of seed to mix with it?

What is the best kind of stump puller for a small team?

What can be done to prevent my vinegar from becoming a mass of minute eels?

How shall I sweeten a meat tub? Would it be a good thing to slake lime in my tub? The tub does not exactly spoil my pork, but it is not kept perfectly sweet, although I have taken great pains to scald and scrape the tub. E. S. PEARSON.

South Peacham, Vt., 1870.

REMARKS.—Red-top seed is frequently sown in August, but if so it should be on quite moist soil. The amount of seed used for an acre differs very much with different persons,—varying from one to five pecks. We always sow one bushel for every acre, and a pretty long experience justifies the practice. A bushel of red-top in the chaff weighs about twelve pounds, and in that twelve pounds it is estimated that there are 80,000,000 seeds, so that if sowed evenly there would be something like ten seeds to every square inch of the ground.

There are many stump pullers; which is the best we are not able to say. A description of a home-made one by Mr. H. Marsh, of Hudson, N. H., in the *Mirror and Farmer*, was copied into these columns last year, and may be found in the Monthly NEW ENGLAND FARMER, May, 1869. It says:—Take three pieces of common joists, put them together in form like the common harrow, letting the tapering or forward ends lap by each other some six inches, making a place for the chain to rest in. Cut off the roots at any distance you please from the stump, place the machine on one side of the stump, tapering end up, hitch the chain on the opposite side and pass it over the machine; then hitch a good yoke of oxen thereto and you will see the stump rise. He has cleared about three acres in this way.

This certainly commends itself by its cheapness and simplicity, as any farmer can make one in a single hour.

As a general thing, when a meat tub has become tainted, it is better to put it to some other use and get a new one for the meat. However, if the taint is only slight, it may be made sweet by dropping shavings into the bottom of the barrel and setting them on fire. They should lay lightly upon each other, and be enough of them, when ignited, to send the blaze all around the inside of the cask, but should not burn long enough to char the wood.

All vinegar, we suppose, has living animals in it; but when the "critters" get so large as to be distinctly seen by the naked eye, in the cruet while on the dinner-table, it certainly is not so inviting as it might be. It is not hard to eat a nice, fresh oyster alive, but to eat a wriggling eel, whose convolutions would stubbornly resist the entombment, might be a more difficult thing to do.

If vinegar is made of pure cider, we can see no reason why it should not be clear. Vinegar is best kept in the attic, wood house, or some place above ground, rather than in the cellar. Freezing does not injure it, as the water contained in it is frozen before the acetic acid is; hence, weak vinegar is made stronger by partial freezing. But to come to the point as to what you can do to "prevent your vinegar from becoming a mass of minute eels," we would suggest that the vinegar be put into a well-tinned vessel, and made to boil for one minute over a strong fire; or, put into bottles, and then into a kettle of water upon the fire and then boiled; this will coagulate the glutinous and mucilaginous matter which all vinegar contains, and may be separated out by straining. If the vinegar is then kept in well-corked bottles it will last good for a long time.

As the subject is one of importance to every family, we give below some of the methods described in one of Schule's essays for preserving vinegar. He says:—

It is a fact generally known that vinegar, of whatever kind, will not keep long, but in the course of a few weeks, especially in the warm temperature of summer, grows turbid; its surface

is then covered with a thick, mucilaginous substance, during which time the acid disappears by degrees, and at last is entirely lost; whence the vinegar must very often be thrown away. Now, in order to avoid this spoiling of the vinegar, five methods are known. The first is to prepare the vinegar very strong and sour at first, by using more sugar or other materials. It is well known that such vinegar will keep for several years; but as few people prepare their own vinegar, most persons contenting themselves with buying it at the shops, there are, of course, but few who can make use of this method.

The second method is, to concentrate the vinegar by freezing; after which a hole is made in the crust of ice which covers it, through which the part that is not congealed is let out, and afterwards put into bottles. This manipulation answers well enough; but nearly one-half being lost because that which forms the crust of ice is nothing, for the most part, but water, good economists dislike it.

The third method is, to prevent the access of air by filling the bottles full and keeping them corked. Though vinegar is kept long by this method, it is not much employed, probably because it is troublesome to fill up the bottle with clear vinegar from another bottle every time you have made use of a part of its contents.

The fourth method is, to distil the vinegar, and thus leave behind the impurities. Distilled vinegar does not suffer the least change, though exposed to a warm air for years; but the expense of distilling is often thought too much."

CARE AND DISEASES OF YOUNG TURKEYS.

The disease spoken of by "J. G." in the FARMER of July 23, is, as you suggested, one that is somewhat natural to the turkeys, but is generally the result of improper care, in-and-in-breeding, filthiness in poultry houses, too close confinement, or want of proper food.

I do not know any remedy. If I ever had any ailing turkeys they usually died. But I would suggest to "J. G.," and others who may be interested, how these diseases may be prevented, and the turkeys kept in perfect health, so that they will not droop at six weeks old, nor at any other age, from the time they are hatched until they are ready for market.

In the first place, when you select your turkeys to keep over, select the hens from one flock and the gobler from another, between which there is no relation, and from healthy flocks which have not been diseased. Small turkeys that have recovered from sickness are liable to disease again after they are grown, as is also their progeny. Their coops should be moved often while small, and the young turkeys should have their liberty during the day as soon as it is safe to do so, and their place of shelter at night should be kept free from any offensive smell. This can easily be done by sprinkling dry earth or muck on their droppings at least once a week, and an occasional dusting of plaster will be found beneficial to remove any unpleasant odor. This is not labor lost, nor should it all be charged to the turkeys, as the compost thus formed is amply worth all the pains taken, and is the very best for the garden and for corn.

One item more about feeding turkeys. A lady was just telling me about her turkeys. She said, "Some days I feed them, and some days I don't. I had quite a large flock, but have but few now;" and then she said, "how can *you* make them live, and what do you feed them?" I like to have them fed every day until they are two months old at least. I do not feed them all they can possibly eat at a time. I think they do better to leave them a little hungry, unless they are very small. I do not feed them much corn meal. Buckwheat should not be given on any account. I think it is the worst food they can have. I use mostly shorts, or what we call middlings—that between bran and flour—putting in a little flour or wheat bread, when they are small, mixed with sour milk. If the milk is warmed just enough to drain off the whey, and use the curd, it is better. I find that a little extra pains in the care of turkeys is as sure to pay in the end as it is in anything else, as everything that is worth doing at all is worth doing well. A FARMER'S WIFE.

Hyde Park, Vt., July 28, 1870.

WHEN SHALL I APPLY ASHES?

I have a piece of ground on which corn was raised eight years ago, guano being the only fertilizer used. Since that time the land has not borne any crop, and is now in a low state. I think of sowing it to rye this fall, and using ashes as a fertilizer. At what time shall I apply the ashes—in the spring or fall? A. S. SMITH.

Mittineague, Mass., June 23, 1870.

REMARKS.—Apply the ashes when the ground is prepared for the rye. Spread them in a dry state, in still, fair, or cloudy weather. Not when raining, as is sometimes recommended for sowing guano.

In reply to a similar inquiry in the New York *Tribune*, addressed to Prof. Colton, the following statement is made:—

"The latter part of winter or the earliest days of spring would be best for several reasons: 1st. You are likely to have most ashes then. 2d. The rains will soon come and incorporate all the valuable matter in the soil. 3d. You get very soon the value of your ashes. If you put on in the fall, the snows of winter are apt to absorb some of the potash, and chemically decomposing it in melting to throw it off in the atmosphere as an ammonia. Leach ashes are undoubtedly the most economical for the farmer, as by mixing quicklime with his ashes, he gets a good caustic potash for soap, and also improves the ashes for his land. Unleached ashes probably act quickest, and if mixed with plaster are apt to return all their value."

SHORT-HORNED CATTLE—SUFFOLK PIGS—POULTRY AND FRUIT.

A walk of an hour over the premises of John S. Emery, Esq., of Wallingford, Vt., satisfied us that he, more than any other man of our acquaintance, is farming upon a high and improved principle, and that it will thereby benefit himself and the community none can doubt. Probably Rutland County cannot produce another instance to compare with this. The full-blood Durhams now owned by him number nineteen. Of course this does not include several that he has disposed of, nor some he has lost. Mr. Emery remembers the truth of the saying that "They that have must lose." The large and commanding appearance of his Durhams will repay the lover of good stock for the expense and time incident to a trip to his place. Among his stock may be seen two cows,

four three-year-olds, three yearlings, and six calves, as fine looking as any equal number that can be found. A yearling bull out of the celebrated "Cavalier," of Thorndale stock notoriety, bred by J. A. Harwood, Littleton, Mass., was particularly attractive. "John" has received several premiums at our county fairs; but this neither flatters nor satisfies him, as he is still enlarging and improving his herd.

His swine, too, are selected with reference to the same great principle, improvement. He has now a very fine specimen of a hog in the shape of a Suffolk boar. Nor does he stop here. His poultry is selected from among the best and most approved breeds in the country.

We do not know of another man who raises so large a quantity and so many varieties of apples, pears, plums, cherries and grapes as is produced on this farm. A VISITOR.

East Wallingford, Vt., August 2, 1870.

CROPS AND SEASON IN MERRIMAC COUNTY, N. H.

As you appear to have reports of the crops, season, &c., in your valuable paper from almost every locality in New England, I concluded to give you a brief account of them from this point.

It is perhaps a little early to give a definite idea of some of the crops. Our hay is harvested in good condition. Though a great deal less than the three preceding years, and considerable less than an average crop, it is of excellent quality. The grain, as a whole, will be more than an average yield, though uneven on account of the difference of the dryness of the soil and time of sowing. The corn crop is yet undecided in consequence of the drought. It has a good growth, but looks now as though it might be seriously affected on light, sandy land, if not a total failure in some instances. Early potatoes are very light, and late-planted ones will be much lighter if we do not have rain, though undoubtedly we shall in time to save many fields. Apples at this writing promise an abundant crop.

In regard to the season, we have had a very remarkable one as regards the heat and drought. Since June came in we have had it *excessively* h as well as dry, the mercury ranging, with the exception of June 21 and 22, from the eighties to one hundred in the shade. Apples that have fallen upon the ground are apparently baked. At this time, as you pass through our section of the country, and see spring grain a portion of it fit to harvest, the corn-stalks fully grown, and apples most as large as at harvesting time, it really appears like August instead of July. In fact, the heat and drought have so matured the crops and vegetation that it has been a sort of hot-house growth, and we have had nothing equal to it in the last forty years. B. F. C.

Northfield, N. H., July 28, 1870.

A LOOK AND A THOUGHT.

Nature teaches the observing. Walking about on the 30th of July, there was an opportunity for an observing man to make a note of matters, which, to the workers, are worth studying a little.

Plants have very different powers of penetration, perhaps different faculties for feeding. I observe that some carrots, and some Swedish and some German turnips make very different use of different circumstances.

Part of my ground occupied by carrots was well ploughed; part was thoroughly spaded also with a fork. On the part which was only ploughed and then levelled with a hoe and rake, the carrots stand better, four to one, and are much larger also than on the ground which was so forked as to be very much lighter. The difference most distinctly marks the line between the spaded and that which was not, and in favor of the latter for the carrots. All was dressed alike.

With turnips it is entirely the reverse. Where I have three kinds of turnips, Ruta Baga, Yellow Aberdeen and Sweet German, the advantage is very greatly in favor of the thoroughly spaded or forked ground, both in the standing and growth.

It would therefore appear as though the carrot did better where the soil was not extremely mellow; but that the soft and tender roots of turnips demand the most mellow condition of the soil.

The destruction of the greater portion of plants by insects, in both cases, was where the plants made the most feeble start. Things for thinking.

Lee, N. H., Aug. 1, 1870. A. G. COMINGS.

SAND FOR BEDDING.

I wish to inquire if you think dry sand is as good for bedding for cows as sawdust? Which, in your opinion, is best for the soil? My soil is rather sandy. I have always used sawdust, as I have not much more muck than I want in my yard and for other uses. The October flood of last year washed up a large amount of sand near my barn. I have used some; it gets very dry, is rather coarse, and I find it takes more of it than of sawdust. I have to go three miles for my sawdust, and pay for it at that. C. F. LINCOLN.

Woodstock, Vt., 1870.

REMARKS.—We should prefer the sawdust unless we were preparing composts for low grounds. In that case, the sand would be a valuable dressing. Many good farmers do not think sawdust of much value in the stalls, and of none whatever in the manure. It certainly is a pretty good absorbent, and forms an easy bed for stock of any kind to lie upon. When old, small applications of it may be made every year with advantage. It is supposed by some to be injurious to the soil. Applied in large quantities at once, it probably would kill grass, and render even compact soils too loose and porous.

ONE PIG GROWS FASTER THAN ANOTHER.

I have two very fine pigs, three months old,—one a sow the other a barrow. The barrow gains flesh faster than the sow. The latter while eating is in the habit of lifting its nose and pressing it hard against the upper edge of the trough, somewhat as a cribbing horse presses his teeth on the crib. This is something new to me. What is the cause? and what the remedy? A SUBSCRIBER.

Northwood, N. H., July 30, 1870.

REMARKS.—This is no uncommon experience in pig growing, as you will probably ascertain by inquiry among the old farmers of your neighborhood.

FALLING OF THE WITHERS IN COWS

This troublesome complaint attending many cows just previous to their calving, and which appears to be increasing is, I believe, very much aggravated by their being compelled to lie upon short plank stalls, by which a hard strain comes upon the hind quarters. When once a weakness of this kind is created, it is apt to continue and increase. In this way I believe, the value of many a good cow has been greatly diminished. The writer had a valuable Alderney cow which was very much troubled by this falling, and which he has no doubt was caused by her lying upon a

short stall when big with calf, and the property of a previous owner. For a fortnight before calving, nearly every morning it would be necessary to return this fallen sack. Before doing so, it should be carefully washed with a soft sponge and luke warm water. It may then be returned by raising it with the palms of the hands underneath and gently pushing inwards. If not inflamed greatly it will usually slip readily into its place.

A cow big with calf should be carefully treated, and allowed plenty of room, and for some little time before calving kept by herself in a roomy comfortable place. A good farmer or stock breeder will have a place or places fitted for this purpose. Aside from the inhumanity, it is one of the most impolitic and destructive of neglects to allow any domestic animal to suffer for the want of proper attention. Much is yet to be learned on the part of those who have the care of dumb creatures, in the way of securing their comfort.

CRUELTY TO SHEEP.

I have just been informed by a perfectly reliable gentleman that a few days since, during the hottest weather, he saw in the town of Westport, four wagon loads of sheep from Naushon Island, having been brought across Buzzard's Bay, and carried some seven or eight miles over a rough road, under the broiling sun, and suffered to remain in this condition in front of the slaughter house, until the next day; having been, as he supposed, some forty-eight hours thus incarcerated. When it is remembered how much sheep and little lambs suffer from the heat even in pastures, it must readily be seen how great must have been their suffering by such unwarrantable cruelty. The earth still groans with cruelty; and man's inhumanity to the brute creation, must cause even angels to weep. Let every friend of humanity exert all his influence for an improvement, for without humanity there can be no true religion. R.

New Bedford, Mass., July 26, 1870.

PRUNING APPLE TREES.

I wish to know the best way to trim a young orchard. I have one of three hundred trees, sixty-five of which are grafted in the root, and have been set nine years. Some of them cover one rod of ground with the top. How shall I trim these? Shall I cut off the ends of the branches, or otherwise? About one hundred are seedlings, which commenced to blossom this year; the remainder are grafted trees—some four years, some two years from the scion. How should they be pruned and taken care of? How shall I keep the bark-lice off of them? I have some trees that are very lousy. Will dry ashes or air-slacked lime, scattered into the trees when wet, do any good?

Backwoodsman.

North Montpelier, Vt., 1870.

Remarks.—The true way to prune an apple tree is to commence upon it as soon as a branch starts in a wrong direction. That is, if it turns in so as to cross the tree, or if its direction will lead it to cross other branches, take it off as early as possible.

On good soil, nearly every apple tree will throw out more limbs than ought to grow. The cultivator, therefore, must see them often during the growing season, and take away such portions of the branches, while young, as will leave the tree sufficiently open to admit light and air, and to be as evenly balanced as possible. He cannot do this in one year or two, but must bring them into shape in the course of ten or twelve years. He must look at the tree prospectively; have in his mind's eye all the time just what shape he would like to see when the tree is fifteen years old.

It is not common to head in apple trees; that is, to cut off the ends of the branches. Some of the side shoots of the branches ought to be taken out near their extremities, if the tree is vigorous, which will leave it open to external influences.

It will be a slow and difficult thing to keep off the bark-lice. Quick-lime scattered over the branches might be useful, especially if applied when or soon after the grub hatches out, say from the 20th of May to the 20th of June, according to section and season; but a pretty strong soap-suds, applied with a scrubbing-brush such as the women scour floors with, would be better. A weak fish brine, such as may be obtained at the stores from mackerel barrels, is said to be efficacious in destroying bark-lice, so we are informed. The dry ashes would be excellent for the trees, even if it did not kill the lice.

A few simple rules should always be observed in pruning.

1. Never prune when the sap is running freely, as in March, April and May. But,

2. When the sap has gone up to form bud, blossom, leaf and fruit, and is elaborated into a thicker, gummy substance, and is descending between the bark and sapwood to increase the diameter of the tree. This will take place about the middle of June, and continue two or three weeks, and again after the leaves have fallen in the autumn. Branches cut off at these times will rarely bleed, but soon form a ring of smooth, green bark around them, and heal over rapidly.

3. All branches should be cut off smoothly, and close up to the stock from whence they are taken. If a stump is left, there is no action in it; it *never* heals over, but soon decays, and the decay runs into the main branch, and checks the vitality of the whole tree.

More trees are injured by cutting them at the wrong season, we think, than by any other cause.

RED-HUMPED CATERPILLAR.—*Notodonta concinna.*

Specimens of this caterpillar were recently received from a correspondent in New Hampshire, we believe, but unfortunately the accompanying letter was mislaid. They are something entirely new to our correspondent, who gave a brief description of their gregarious habits, and remarked that they were hideous looking creatures, appearing as though they had a head on each end. We have occasionally found them upon our apple trees, but have never known them in sufficient numbers to cause any serious damage, though they make a clean sweep of the foliage as far as they go. Being an "old acquaintance" we regard them as one of the best dressed and most beautiful caterpillars we ever saw, unless we except the Tussock Moth. With a clean red head and red hump, with bodies handsomely striped with longi-

tudinal lines of black and yellow, black prickles on the back, hinder extremity generally elevated for an extra head, wearing black stockings, social and orderly in their habits, we have always looked upon them as fine specimens of a caterpillar dandy.

Mr. Harris says different broods make their appearance at various times during August and September. The eggs from which they proceed are laid in July, in clusters, on the underside of a leaf, generally near the end of a branch. When first hatched they eat only the substance of the under side of the leaf, but as they grow larger and stronger they devour the whole leaf, from the point to the stalk, and go from leaf to leaf down the branches. The young caterpillars are lighter colored than the old ones. When full grown they measure an inch and a quarter, or rather more, in length. All the caterpillars of the same brood descend at one time, and disappear in the night. They conceal themselves under leaves, or just beneath the surface of the soil, and make their cocoons, and are transformed to moths towards the end of June or the beginning of July of the following year. The moth is of a light brown color. The wings expand from one inch to one inch and three-eighths.

We know of no other way of destroying the caterpillar than that of removing the leaves or branches on which they cluster, sometimes so closely as to cover leaves, small twigs and ends of branches.

CANKER WORMS.

I would like to ask a few questions in regard to the location of the canker worm. Where did they cause the most trouble this year? Are they as numerous in other States, as they are in Massachusetts? If so, which ones are they? Have they got into the Western States to any extent yet? ONE INTERESTED.

Marlboro', Mass., Aug. 8, 1870.

REMARKS.—So far as we are informed, the canker-worm first appeared in the eastern part of New England, more than one hundred years ago, and for a long time was confined to a narrow territory. They have several times mysteriously disappeared, or nearly so, from certain localities. The cause of their disappearance is not known. Some have supposed that the frost or ice or cold rains occurring soon after hatching, destroyed them. Others have ascribed it to other causes. The canker worm is now more generally disseminated, probably having been carried on trees from infected districts. It is appearing in most of the Western States and Canada; but in none of them is it as universal as in the eastern part of Massachusetts. We cannot give a correct list of the localities in which they have been most destructive the past year. Three years ago they wholly disappeared from some places near Boston; in others, their numbers were greatly diminished. In some of these places they have since increased to nearly their former numbers.

A full reply to your questions would form an interesting article, which we hope some one will write. The canker worm is spreading over our whole country. It threatens the destruction of our fruit and shade trees. Were one-half the loss occasioned by this insect to be caused by fire or flood, the whole population would turn out to save property; but as it is only a worm that does the mischief, men tamely submit to its ravages with a calm sigh of regret.

PETITION OF THE ONION AND CARROT,

As heard by an old gentleman of ninety-three summers, while leaning over the fence of a weedy garden.

The undersigned, with good intent,
Their humble suit would now present,
And ask your honor, much respected,
Why is your garden thus neglected?
What has your little Onion done,
That he should never see the sun?
And why your humble Carrot needs
Be covered thus with giant weeds?
T'would by the calendar appear,
Eclipses six there are this year;
For them an hour's time is plenty,
But ours outlasts the four and twenty.
While things are thus, 'tis vain to hope
To gather but a scanty crop.
We'll tell a story, now in place,
And suited to the present case,
About a shoe, 'twas like to fail,
And all it wanted was a nail;
The owner spared the trifling cost,
And shoe, and horse, and man were lost.
So if your garden is not freed
From every bad and noxious weed,
Your labor proves of no avail,
And seed and crop alike must fail.
Thus, as in duty bound, we pray
You'll grant relief without delay.

ONION & CARROT, BY MNASON.

Strong, Me., Aug. 6, 1870.

"GOING ON TO A FARM."

Having received benefit from many valuable hints in editorials and correspondence of the "FARMER," I will try to reciprocate by giving an account of some of my experience and the results of my observations among my neighbor farmers, for the benefit of T. E. P. and others.

Judging from the successes and failures in the various cases under my observation, I am satisfied that a young man and wife with tolerably good constitutions, without children or with one or two smart boys that they intend shall do a reasonable amount of work suited to their strength, can succeed better at farming for a series of years than the *average* of merchants and mechanics, provided they commence under right conditions and requisites.

The husband and wife must pull together, with the one single aim of success; must make up their minds to some real and perhaps many imaginary privations, and to meet discouragements, sometimes thick and fast. They must leave behind all thoughts of cigars, mint juleps, billiards, oyster suppers, kid gloves, fifteen-dollar bonnets, &c. And if they have had no practice either at farming or gardening they must so govern themselves that they can employ a part of their time for the first year or two at some other occupation, and such as

will bring in some money, upon which a tight "purse string" will be needed. All important to them are prudence, economy, industry and *fortitude*.

For this part of the country, I know of no place better for a man with small capital than a farm near some large manufacturing town, large enough to keep a cow or two, a horse and pig, and leave enough land, say from three to five acres, for fruit and vegetables.

An elderly, tough horse, to cost say $50 to $75, will do to begin with; a good native cow, at about the same price, will furnish much of the food for the family, and $5 worth of young pigs make a good machine for turning sour milk and table scraps into pork for the winter, and converting weeds and waste fruit into manure for next crop.

Each year I would buy a moderate quantity of good, well tested fruit trees, bushes and vines—no fancy or high priced ones—making your plan for the entire fruit patch before setting the first tree. Between these may be cultivated low-growing, small leaved vegetables or strawberry plants. For fruit you must wait patiently two or three years; meantime cultivating good annual crops of vegetables for market.

In the vicinity of large factory towns such as we have in Worcester county, I have great faith in the profitableness of early crops of onions, turnips and beets; great pains being taken and reasonable outlay to get them early and of quickest growth.

The vicinity of large seaboard cities, like New York and Boston, is to be avoided by the young farmer of small means. Lands there are high priced. Old, shrewd and experienced gardeners are abundant, and the products of distant States received by steamer, compete with home products. Prices in interior towns average considerably higher, and in fact much of their supplies come second-hand from seaboard cities.

I will, in another letter, give a sketch of the result of my first year as a beginner at farming.

Worcester County, Mass., Aug. 6, 1870. Ex.

Remarks.—We must take exceptions to the remark of our correspondent as to childlessness being a desirable condition for a family that proposes to engage in farming. The fact that the farm is favorable to the rearing and training of children is, in our opinion, the strongest possible argument in favor of farming that can be urged upon all families who are not smitten by the curse of God or their own criminal acts. Especially on such a farm as that proposed by "Ex," children may be regarded as blessings, even on the lowest financial plane of view. Here their little fingers may assist in a great variety of work, and habits of industry may be established of far greater value to them than the inheritance of a portion of the fortunes occasionally accumulated by men in other professions and pursuits.

Contrast the prospects of the young man brought up to idleness, habits of "liberal" expenditure, and the expectation of thousands he never earned and does not know how to take care of, with those of one who, from his earliest recollection, has had a practical knowledge of what every dollar in his pocket costs, and who has been trained and fitted to rely on himself! Which needs our sympathy and our pity? Which will make the man, and which the fellow?

Above all others, the farm is the place for a family with children of both sexes. For a childless family, one place is about as good as another. Its course will soon be run. It is an outcast, at war with nature, and unfit for the green fields and the productive soil. Let such meet the oblivion they court amid the brick walls of the city, which but for fresh blood from the country farm would soon be not only childless but manless and womanless.

HORSES IN VERMONT.

Wishing to buy a few horses about sixteen hands high, and weighing ten to eleven hundred pounds, I recently visited Windsor County, Vt., and was surprised and discouraged by the style and sizes of the horses of that section. Their Morgan horses, as they are called, are from 14 to 14½ hands high, with plenty of ringbones on their feet, the result of in-and-in breeding, and of using unsound mares, &c. It appears clear to me that farmers would find it for their interest to raise a better class of horses. If they do not do so, buyers of course will look elsewhere for good horses.

August, 1870. H.

Remarks.—Whatever may be the facts in regard to the size and soundness of the present generation of horses in Vermont, we suppose no one will doubt that in Vermont, as well as in other States, there has been a marked improvement in speed within the past thirty or forty years. According to Porter's *Spirit of the Times*, a bet of one thousand dollars was made, in 1818, that no horse could be produced that could trot a mile in three minutes. Now an agricultural horse trot at a county fair at this pace would hardly deserve a "premium." What connection this gain in speed has with the loss in size alluded to by our correspondent and admitted by horse breeders, is a question for the consideration of those who would trace cause to effect.

ABOUT DITCHING.

I cannot agree with you in your instruction to John L. James, of Maine, in regard to running down the hill in the direction of the general slope, that is, so as to fall more than two or three inches to the rod. I would run my ditches crosswise, commencing near the top of the wet land, three or four feet deep, and if the land is springy, more below may be needed, but none commenced nearer than the level of the bottom of the one above.

If the water from the drains run down the hill steeper than a fall of two or three inches to a rod in length, it is apt to wash, and then the stones will get out of place and settle; then dirt is apt to get in and fill it up. I use cedar poles in the bottom of the ditch, about two inches apart, then cover with stone and cedar bark. Do not use straw, for mice will cut it and clog the ditch.

But different kinds of land may require different kinds of ditches. If there is much water in the ditch, and it must run down where it is steep, I would protect the bottom with two planks, spiked together like an eave-spout. The straighter the water runs in the bottom of the ditch the better; I mean not having it run from one side to the other of the ditch. It will be less liable to wash or clog. I would not recommend having the ditch more than one foot wide at the bottom.

A. L. Gillis.

South Danville, Vt., August, 1870.

Remarks.—Our reason for recommending drains to run up and down the slope, instead of cross-

wise, was, that when the descent is steep, the water in the higher strips of land, between the drains, will come out at the surface instead of going down to the bottom of the next drain. It must be remembered that water, whether on the hill-side or in the valley, is always seeking to find its level. It does not conform itself to the side-hill, but seeks to find a level wherever it is.

Speaking of drains *across the slope*, Judge French says, in his "Farm Drainage,"—"Now, looking at the operation of drains across the slope, and supposing that each drain is draining the breadth next above it, we will suppose the drain to be running full of water. What is there to prevent the water from passing out of that drain in its progress, at every point of the tiles, and so saturating the breadth below it? Drain-pipes afford the same facility [and so do stone drains] for water to soak out at the lower side, as to enter on the upper, and there is the same law of gravitation to operate in each case."

Mr. J. Bailey Denton, Engineer of the English General Land Drainage Company, says:—"I recently had an opportunity, in Scotland, of gauging the quantity of water travelling along an important drain carried *obliquely across the fall*, when I ascertained with certainty that, although the land through which it passed was comparatively full of water, the drain actually lost more than it gained in a passage of several chains through it." With a more careful investigation of the matter, we think our correspondent will conclude that we were right in recommending to follow the general slope, be it much or little.

NO CANKER WORMS NEAR PINE TREES.

Not long since, I heard a man say that Canker worms would not live among pine trees. The idea was new to me, but on looking around within the circle of my knowledge, I can not disprove it. In a town adjoining Beverly where the canker worm eats very badly, there is a pine tree with two apple trees standing very near it, and while all the apple trees in that vicinity were almost entirely stripped, those near the pine were untouched. I have made frequent inquiries and have not found a man who ever saw Canker worms in the immediate vicinity of pine trees.

Now, Mr. Editor, I wish to know if you, or any of the numerous correspondents of the FARMER have any facts bearing on this subject.

Beverly, Mass., July 29, 1870. L. COLE.

HAY AND HAYING IN WESTERN VERMONT.

The hay crop in many places in western Vermont is very light this year. Last year it was so heavy, that one team and machine would mow for two teams to draw, while this year one ox team can draw what two smart horse teams with two mowing machines can mow. Some men have attempted to lay down rules for cutting, curing and storing hay. My rule is to cut, cure, and stow away as fast as possible when the weather is good and the hay in proper condition for harvesting. This year the days are all good hay days. I have the horse rake (the old wooden revolver, the best hay rake ever invented,) follow the mowing machines after the dew is off in the morning (but seldom we have any this season,) draw the hay into the barn green, put in a layer of hay, salt it a little, and then put on a layer of oat straw that I stored away last season in good order. I have filled two bays in a barn 52 by 36 feet to the great beams, and I trust my hay will come out bright next winter.

ONE WORD RESPECTING LABOR.

The Chinese question is being agitated by politicians, by the friends of humanity and by the producing classes. You have not the space to allow me, neither have I the time or talent, to discuss this question in its broadest sense. I want to see no class of men introduced into this great Republic as slaves, either apprenticed, or otherwise, but would let all come as freemen to better their condition. One thing is true, we cannot continue to produce for the consumer in New England and pay the present prices of labor. The producers must have their hands strengthened or consumers may expect to face *starvation*. J. N. SMITH.

West Addison, Vt., July 12, 1870.

TO KEEP OFF CABBAGE WORMS.

Tell your correspondent "H. D. U.," of Monroe, N. H., who is picking off the green cabbage worm to save his cabbages, to dissolve half a pint or more of salt in a pailful of soap-suds or water, and with a watering-pot wet the leaves every other morning for a week. When there is no rain to wash off the salty sediment from the leaves, if it does not destroy all worms, lice, or insects that trouble the cabbage, his experience will differ from mine for the last fifteen years. S. S. T.

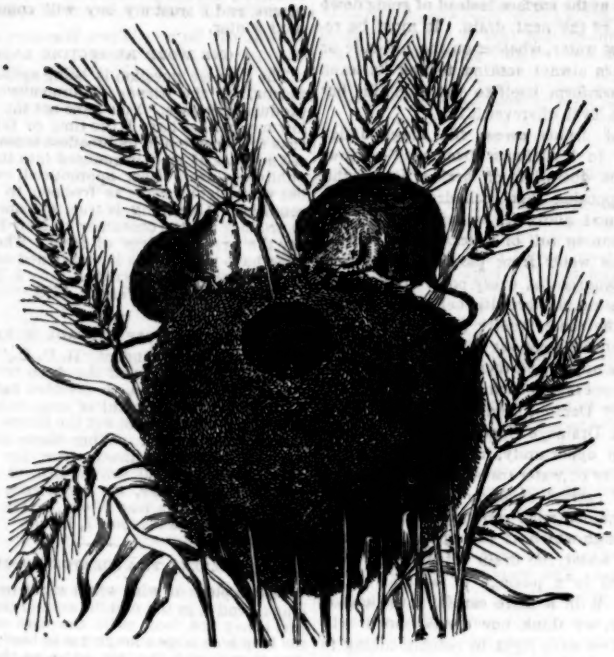
Holliston, Mass., August 1, 1870.

TO PREVENT THE SCRATCHING OF HENS.

Take a piece of wire some eight or ten inches long; bend it in the middle around the hen's leg, just above the foot, twist the wire once, leaving the loop hole large enough not to bind or chafe the leg; then spread the two wires so that the ends will be three or four inches apart, and turn down an inch or so of the extreme ends of the wires so that they will catch in the ground. With such a wire on each leg, the hen will not disturb a garden or any place, as they cannot scratch though they can walk with little difficulty. C.

Keene, N. H., July 18, 1870.

QUEEN BEE LOST AND FOUND.—Mr. Wm. Talmage, a highly respectable and worthy citizen of Athens, Ga., who cultivates bees on a small scale, in the garden adjoining his residence, observed that a swarm from one of his hives, was very much agitated, refused to settle, indicated distress by a peculiar buzzing, and after some time flew away to a distance. While trying to discover the cause of their disturbance he accidentally discovered the Queen bee entangled in some grass and weeds in his garden and only attended by a few of her subjects. He relieved her from her critical position and put her under an inverted tumbler on a table in the garden. The faithful lieges who had remained with her continued to buzz around her for a little while, and then some of them flew away in the same direction which the swarm had taken. After a short time the whole swarm returned, rallied round their Queen, peace and happiness were restored, and the swarm easily and comfortably hived.—*Georgia Farm and Home.*



THE HARVEST MOUSE.

In the agricultural books and papers of England this mouse is often mentioned, but we are not aware that it is found in this country. It is only two and a quarter inches long from end of nose to root of tail, which measures about two inches more. The back is of a bright ruddy hue and the abdomen white. The ears are shorter in proportion than those of the ordinary mouse; the head is larger and more slender, and the eyes less projecting. Their food consists greatly of insects, flies being especial favorites, in the capture of which their remarkable agility is most pleasingly illustrated. These beautiful little creatures make their nests, as represented in the cut, among standing wheat, or other grain, or in thistles and other weeds, at some distance from the ground. The nest is a curiosity. According to the description in the book called "Homes without Hands," the nest is made of very "narrow grasses, and woven so carefully as to form a hollow globe, rather larger than a cricket-ball, and very nearly as round. How the little creature contrives to form so complicated an object as a hollow sphere with thin walls is still a problem. It is another problem how the young are placed in it, and another how they are fed. The walls are so thin that an object inside the nest can be easily seen from any part of the exterior; there is no opening whatever, and when the young are in the nest they are packed so tightly that their bodies press against the wall in every direction. As there is no defined opening, and as the walls are so loosely woven, it is probable that the mother is able to push her way between the meshes, and so to arrange or feed her young."

In this airy cradle may sometimes be seen as many as eight young mice, all packed together like herrings in a box. Being very expert climbers, these mice move among the straws of grain as readily as monkeys do among the boughs of trees. These mice are often carried in sheaves from the field to the barn, where they live and multiply.

PROFIT IN STOCK FEEDING.

There is a general impression at the East that fattening cattle and hogs at the West is very profitable business. An Ohio feeder states, as the result of experiment, that beef at 6½c. and pork at 9c. per pound, live weight, gave him 55½c. per bushel for corn. An Illinois farmer says that, in his section, they cannot afford to feed corn after the price has reached fifty cents. A farmer in Central Illinois, who is a prudent, careful and economical man, shows by his books that he does not get fair pay for his labor when he sells good cattle at 8c. per pound, live weight.—*New England Farmer.*

There is evidently something wrong in the above statement. In fattening a large lot of hogs—say from one to five hundred head—it requires eight hundred and forty pounds of shelled corn to put on one hundred and fifty pounds of pork. This gives the feeder, at nine cents per pound, gross weight, *ninety* cents per bushel. In small lots—ten to forty head—the feeder can do much better. Our corn in Kansas costs us, on an average, among the reasonably good farmers, a trifle less than thirty-five cents per bushel. That our readers may judge of the correctness of this statement, we give our estimate. We take twenty-five acres as the basis—about what one man will tend. Rent of ground, at four dollars per acre, one hundred dollars; seed, twelve dollars; labor, one hundred and five dollars; team, seventy-five dollars; total, two hundred and ninety-five dollars. We estimate that it requires seventy-nine days' labor to plant, cultivate and gather twenty-five acres. This estimate we know to be fair; but we also know that there are scores of farmers who do better than this. The average yield we place at forty bushels (not ears) per acre. In feeding cattle, it is difficult to estimate what the exact profit is, from the fact that hogs and cattle are fed together, and rarely with sufficient care to determine the proportion of grain each one gets; but at the prices above stated, we know that our farmers realize from eighty-five cents to one dollar per bushel for every bushel of corn fed to either hogs or cattle. What say you, farmers?—*Kansas Farmer.*

In confirmation of his assertion that there is something wrong in the statements of the three practical feeders cited by us in the brief article above quoted, the editor of the *Kansas Farmer* presents an "estimate," which we copy above in full. To our sense, both the estimate and accompanying remarks have the odor of the office rather than of the field,—of theory rather than of practice. These rose-colored, book-farming estimates of the profitableness of the different branches of agriculture, horticulture, &c., from strawberry raising to stock feeding, are objectionable for several reasons. They mislead, disappoint and discourage the producer, they dissatisfy and sour the consumer, and they discredit agricultural and horticultural reading. We do not doubt that stock feeding in Kansas, as well as in other Western States, is reasonably profitable, when conducted by experienced men, of good judgment and sufficient capital, and we have just as little doubt of the incorrectness of many newspaper estimates, which lead consumers to feel that the prices they pay for meats are extravagantly and extortinously high. When Western farmers pay freight on corn to the Atlantic cities, and sell it here for 75 to 90 cents a bushel, the correctness of the statements of the Illinois and Ohio feeders, that they realize only 50 to 55 cents per bushel, when fed to stock, appears to us more probable than the assumption by the editor of the *Kansas Farmer* that 85 to 100 cents are realized by stock feeders in that State.

Crops at the West and elsewhere are subject to the influence of so many conditions of season, insect depredations and other casualties, that the estimate by the Kansas editor of an average crop of forty bushels of shelled corn to an acre, still further lessens our confidence in his views of the subject. As bearing on this subject, and also on that of the cost of production, we copy from the Illinois correspondence of the *Country Gentleman* the following statement, taking the liberty to italicise a part of one sentence, in which perhaps the *Kansas Farmer* will see "something evidently wrong":—

"If the corn crop of 1870 shall not be of greater proportion and excellence than any since 1860, it will be more the fault of the machinery used to make it than that of the dry summer. Over one-half, perhaps two-thirds, of the whole State where corn has been early planted, then weeded and deeply and well cultivated, there is at present such a stand and earing as has never been seen—no not even in the memorable 1860. The machine planters, which chuck into the soil from six to ten grains in a bunch, the scratching cultivators which truly cultivate the weeds rather than the corn, the sulky ploughs, which straddle the corn rows, but neither plough deeply, stir effectually, nor cultivate closely, all show their unmistakable marks this year. Wherever they have been there you are pretty sure to find spindling stalks, nubbinly ears, and the field yellow up half way to the tassel. There will be a great many magnificent corn acres this year—a great many more acres where the crop will not yield the product of a ten years' average—while for the whole State over I should doubt whether *one-half the whole acreage in corn will come up to an average of five bushels to the acre.* Further, there is every reason to think the crop as to soundness will come up to that of 1867."

—The official returns just received at the Bureau of Statistics show that the total value of condensed milk exported from the port of New York in the year 1869, was $79,652, of which $21,870 went to England, $14,900 to Australia, $9,494 to the United States of Columbia, $9,176 to China, $8,116 to Brazil, $3,087 to Cuba, $3,093 to the British West Indies, and $1,767 to the Danish West Indies.

For the New England Farmer.

FANCY BUTTER.

Editors N. E. Farmer:—Mr. Henderson of Ryegate, Vt., asks for a chapter on "*Fancy Butter.*". Your "remarks" are pertinent, but you propose to serve as a medium for somebody else to make farther reply, and we take occasion to do so, believing that the public interest may be somewhat advanced thereby.

The term "*fancy*" as applied in this and many other cases is generally opprobrious, and indicative of the disgust of those who, prefering to educate the public taste rather than to cater to it, are too wise to learn, and too stubborn to conform to the public demand, and who as a consequence, do not receive the highest prices for their products.

It is moreover a relative term, and does not in any two cases indicate the same thing. In our school days we resided a year in Western Pennsylvania, where the "fancy butter" of the village was made by a Connecticut woman yclept "old mother Smith," who was disgustingly filthy, but her butter, the product of a large dairy, was really much superior to the other soap grease sold in the village, and was always in demand at prices considerably in advance of any other.

We happen to know of several dairies in Vermont where the butter is made and packed in conformity to the taste of a purchaser, and consequently brings ten or fifteen per cent advance upon the very best goods sold in the open market, and of course it receives the sobriquet "*fancy butter.*"

J. B. Lyman, Esq., of the New York *Tribune*, read a paper before the American Dairymen's Association at Utica last winter on "Marketing Butter," and enforced his remarks by passing around among the audience a sample of "Philadelphia prints," a very famous "fancy butter;" but understanding full well the advantage to be derived from comparing the goods with some acknowledged standard, he first exhibited a sample of "good butter" which he had bought at 50 cents a pound, and then the dollar article, and there is not a manufacturer, dealer, or consumer of butter in the land, whose senses are so obtuse that he could not readily comprehend the reason why one should bring twice the price of the other.

That class of people, in one sense happily large, whose senses of taste and smell have become so blunted that they may use anything to lubricate their food, may content themselves with a poor article of butter; but by far the greater part of mankind are always seeking something better, and Mr. Lyman was probably correct when he said—"We have in New York city at least a thousand families who would consume five pounds each—five thousand pounds a week—of just such butter as this; and a price *above* seventy-five cents would not for a moment check their eagerness to buy." And such families are not confined to New York city, but may be found in every city and village in the land.

If we may judge by the spirit of exultation manifested when a dairyman gets a cent or two a pound more for his butter than his neighbor does, it would be a very great satisfaction to get five or ten cents more which is an entirely practicable feat.

We have not now the time to enter into the details of "how to do it," nor is it necessary, as they are elsewhere available to your inquirer at an expense entirely within his reach.

In general terms, however, the following principles may be enunciated:

1st. Absolute cleanliness must characterize every feature of the business. Bad air, bad water and poor feed, taint the milk before it is drawn from the udder as well as after.

2d. Uniform temperature must be secured for the milk room by the use of water or otherwise. This is a very important matter, sadly neglected by most butter makers, and well understood by but very few.

3d. Care and sound judgment must be exercised, that everything be done at the proper time, and in the best manner. One of the greatest evils of the prevailing system of butter making, is letting the milk stand too long before the cream is taken off. It should never be permitted to become loppered. The appearance and quality of the butter should be uniform throughout the year, and this, though easily accomplished by care, can never be the result of chance, so varying and changeable are all the surroundings in the field and the dairy house.

4th. It is not enough to have made a good article, it must be put up for market in a neat, attractive style, and when a style has been adopted it should never be changed except for the most weighty reasons.

When the producer has satisfied himself that he is prepared to put an article on the market that is creditable to himself, and of such uniform quality as to be always and invariably up to the standard adopted, then, and not till then, should he seek a regular customer who will take all his product at "fancy prices."

We have known persons who lacked the facilities or skill to make a uniformly good article succeed in establishing a good reputation, by judiciously putting only their best goods before their regular customers, and the poorer upon the general market.

We lately overheard an old dairyman reproving a member of his family for wasting time in washing off the outside of a butter tub, saying that it did not make any difference how much mud and —— was on the outside, it did not affect the price. It will not always be so, and it is well to begin to reform in that respect.

This is a progressive age, and in every department of human industry radical advances

are being made, and it is the part of wisdom to avail ourselves of all the real improvements.

If a man in Orange County, New York, or in Penobscot County, Maine, has demonstrated by actual and continued sales at a material advance upon the prices commonly received, that he has hit upon a plan of gratifying the tastes of the consumers of his products, thereby loosening their grasp on their purse strings, it is well for others in the same branch of business to investigate the merits of his system at whatever cost, and to adopt so much of it as is adapted to their circumstances. The dairymen of this country have put millions of dollars into their pockets as the result of just such investigations during the last ten years alone, and the end is not yet.

There are associations of one or another kind, in most of the dairy States for this purpose, but their efforts have been mainly confined to the cheese department. The American Dairymen's Association, however, at its last meeting recognizing its increasing importance, on motion of a citizen of Vermont, voted to embrace hereafter the subject of butter among the objects of their investigation, and it occupies the prominent place in the Vermont Association. O. S. Bliss.

Georgia, Vt., Aug. 1, 1870.

For the New England Farmer.

MEDICAL TOPICS.

BY A MEDICAL MAN.

Dysentery.

The term dysentery is used to designate inflammation of the large intestine—the colon and rectum—attended with mucus and bloody discharges. It occurs more or less every season, in sporadic form, and during some seasons, and in some places, it prevails as a frightful epidemic. July, August, September and October are the months in which it most frequently makes its appearance, although it may occur at any season of the year.

Dysentery is generally preceded by an ordinary diarrhœa, more or less severe, with feculent discharges. Soon, however, the evacuations change to mucus, commingled with blood. The quantity passed at each time is generally small, but the act of defecation is often repeated, slight discharges usually taking place every hour or two, and sometimes after intervals of a few minutes only. The quantity of mucus expelled is, in some cases, abundant, and forms a jelly-like mass, called in popular language *slime*, and by those are familiar with the preparation of intestines for sausages, they are compared to "the scrapings of hogs' guts." A fluid resembling beef brine, or the water in which beef has been washed, is sometimes discharged in smaller or larger quantities, but this is much more frequent in epidemic than in sporadic dysentery. Fecal matter of a green color is sometimes mixed with the evacuations, and occasionally round hardened lumps of feces, called *scybala*, are expelled. In the course of the disease, the discharges may become purulent—that is, they may contain more or less of *pus* or *matter*; but this is more common in the chronic form of the disease. The inflammation of the rectum occasions a sensation as if this portion of the bowel were filled, and this leads to the frequent desire to defecate, with as much straining as the soreness of the parts will allow. This desire to strain ineffectually is called *tenesmus*, and is, in many cases, exceedingly distressing. The griping or cholic pains, which commonly precede the evacuations are called *tormina*, and these, with the tenesmus, are the chief sources of suffering in this affection.

There is usually some degree of fever present in dysentery, but, in many cases, it is very slight. In epidemic dysentery, however, fever is a prominent feature of the disease, and is commonly typhoid in type. The pulse may or may not be accelerated; the skin may be natural in temperature, or it may be hotter or cooler than natural; the tongue may be coated, or it may present nearly a natural appearance. The appetite is, in most cases, much impaired, or wholly lost. The intellect is usually unaffected, save in those malignant cases which are much more frequent in epidemic than in sparodic dysentery.

The duration of this disease, from the date of the attack to convalescence, varies from four to twenty-one days usually. No age is exempt from a liability to this affection; but in the majority of cases, the patients are under thirty-five years. Males seem to be more frequently attacked than females. Climate and the season of the year, evidently, have much to do in the causation of dysentery, as is evinced by the fact that this disease is vastly more frequent in tropical and warm climates, than in colder ones, and during the latter part of summer and early part of autumn than during any other portion of the year.

The exciting or immediate causes of dysentery may be atmospheric changes, excesses in eating and drinking, indulgence in unripe fruits or crude vegetables, fatigue, &c. But in many cases it is not easy to trace its origin to these causes, nor to any obvious cause; and this fact renders it probable that a special or specific cause is generally involved in the production of this affection. Sparodic dysentery is never contagious. Whether epidemic dysentery is or is not contagious is a disputed question among physicians of the greatest celebrity and possessing the best opportunities for observation.

Many cases of sporadic, and perhaps a few cases of epidemic dysentery, would, doubtless, end in recovery without medical treatment of any kind; yet there is reason to believe that disease is sometimes arrested, that its duration may be frequently abridged, and that the dis-

tressing symptoms may be greatly relieved by judicious medical treatment. It is desirable that, as early as possible, the fecal contents of the colon and rectum should be effectually removed, in order to prevent their continued passage over the inflamed surface or seat of the disease; therefore the first point in the treatment is to ascertain if the bowels have been spontaneously relieved by large and free evacuations at the outset of the disease. If there is reason to believe that accumulations of feces still exist in the bowels, an effective purgative should be given. Castor oil has been in much repute for this purpose; but Epsom salts, Rochelle salts, Seidlitz powder, citrate of magnesia, &c., are preferred by the best physicians of the present day. After purgation, opium, in some form, is the best remedy. A combination of opium and ipecacuanha in the form of Dover's powder, is one of the best opiates in this affection. The elixir paregoric is an excellent remedy for children. Opium, in powder or pill, laudanum, by mouth or by rectum, and morphia, may be administered advantageously, but this should be done by the advice and under the supervision of a competent physician. The subnitrate of bismuth, tannic acid, gallic acid, rhatany, kino, catechu, logwood, blackberry root, white oak bark, and various other astringents, are sometimes used as auxiliaries.

The treatment of epidemic dysentery should be similar to that of the sporadic form, except that more caution is needed in the use of cathartics, and there is a greater demand for supporting and stimulating measures. Quinia, brandy, and opium are the most reliable remedies in the malignant form of this disease.

During the early stages of dysentery, the diet should be restricted to a small quantity of the blandest articles of food. After the first few days, milk, mutton broth, beef tea, &c., may be given in small quantities. It is an object, throughout the disease, to have the food as purely nutritious as possible. Drinks should be used sparingly. Small quantities of iced water, or bits of ice placed upon the tongue may be allowed occasionally, and a little toast-water, rice-water, &c., may be taken at proper intervals.

The patient should be kept in bed, with the knees drawn up, and a wet compress, covered with a dry girdle, or a dry flannel compress should be worn upon the abdomen. Enemas of cold water are often very grateful, and a piece of ice, wrapped in cloth and applied to the anus, will frequently greatly relieve the tenesmus.

For the New England Farmer.

AN OLD RYE-FIELD---FODDER CORN.

Mr. Editor:—You will remember that two years ago, when you were at my place, I showed you an old worn-out pasture, covered with moss and hardhack, with an occasional white birch or white pine. At that time we had a consultation as to the best method of improving it. Now this lot was in a worse condition than most worn-out pastures, because years ago rye was raised upon it year after year, without manure, till it would bear rye no longer, then it was turned to pasture, and the last skinning process applied.

This spring I fenced off about half an acre, to which, after ploughing, I applied about three barrels of fresh-slacked lime, which was harrowed in. The ground was then furrowed out into rows about three feet and a half apart, and manured in the furrow. Upon one half of it a small quantity of Bradley's superphosphate of lime was sprinkled. Corn was liberally sown for what Dr. Loring terms "the meanest and cheapest of fodders."

The corn on the part to which phosphate was applied came up first, and grew the rankest. On the 15th of July it was eight feet high. That on which the phosphate was not used was about seven feet high. It entirely shadowed the ground, and was of a very dark, rich color. Now, Dr. Nichols says, corn ought not to be so planted, for if the light does not have free access, it will be yellow, and not near so nutritive.

Ever since a boy, I have known that light is an important element in the production of vegetation. Without it carbon cannot be assimilated, and vegetables grown in the dark are colorless, and consist of little but water. I have also noticed that when manure was not freely applied, plants were very yellow, though blest, in consequence of their small growth, with a bountiful supply of light, while wherever there was a bountiful supply of manure, the plants would be large, many of them, and closely crowded; but still they would be of a very rich, dark green.

The latter was just the condition of my corn, which I find to be a very *cheap* fodder; so that I can agree thus far with Dr. Loring. While others are complaining of being short of feed on account of dry weather, I have an abundance; and I see no falling off on account of the change of feed, or the "meanness" of the fodder. My young heifers are growing as fast, and are in as good condition as when the pastures were at the best. My cows give as much milk, and their condition is equally good. If it was not for this patch of corn, which Dr. Loring designates as the "meanest and cheapest of fodders," I should now have to do as many others are doing—draw upon the haymow. As it is, I have a good supply of fodder till next October, with half an acre of improved pasture upon which I shall put more manure this fall, and sow with rye and grass. The rye I shall mow in June, and feed green, and thus be able to keep more stock, and thereby increase the manure for this or other parts of the farm.

Thos. Whitaker.

Needham, Mass., August 6, 1870.

TRIAL OF VEGETABLES, &c.

A part of the grounds of the Michigan Agricultural College is used for experiments, where numerous varieties of any vegetables are planted under like circumstances, and cultivated in the same manner. This affords students and others an opportunity of comparing the growth of different kinds of garden vegetables, &c., under like conditions.

A correspondent of the *Prairie Farmer* furnishes a statement of this year's experiments from which we condense the following:—

Onions.—There are eight varieties. The large yellow Danvers, is liked best on account of color. The red Wethersfield yields best. The soil is gravelly, deeply subsoiled, and thoroughly drained, plenty of rich manure ploughed in, and leached ashes on the surface in spring. They yield at the rate of six hundred and twenty bushels to the acre. Such culture will produce large crops most certainly, be the season wet or dry.

Tomatoes.—They are raising forty-one varieties this year, a variety of their own originating is preferred.

Beets.—They have ten varieties. The best early is dark red Egyptian; best winter is new rough skinned or bark skinned. For market, later, the best is Long Smooth Blood.

Potatoes.—Eighty-one varieties. The early Shaw is the earliest variety that is reliable. Early Goodrich has sometimes rotted a little, and does not always yield well. The early Rose is the first to produce potatoes of good size suitable for market, though the quality is inferior to early Shaw. They are trying seeds of wild species from Mexico and Quito.

Peas —Ten or twelve varieties. Best early Terry & Co's Extra early, later, the best are "Little Gem" and "Champion of England."

Sweet Corn.—Ten or twelve varieties. Farmer's Club the tenderest; the Mexican, sweetest.

Lettuce.—Fifteen varieties. For early, the best is Early Curled Simpson; for late, Persian Curled Crumpled Leaf. Some others grow larger and might suit better for market, but they are tougher and coarser, as the Large India or Giant White Cos.

Squashes.—Nine varieties. For fall use, Boston Marrow and American Turban; for winter, Hubbard; for late winter, Canada Crook Neck, as it keeps well.

Celery.—Six varieties are raised. For early, Early Wyman; for late, Seymour's Superb White.

Cabbages.—They have thirty-two varieties. For early, Early Wyman is recommended; for late, premium Flat Dutch and Winningstadt. The Stone Mason is of good quality, sure to head, and is easily managed.

Beans.—Thirty-one varieties of string beans. For early string select Bagnolet. For shelling early, Royal Dwarf and German Wax: Shelling later, Winter Marrowfat and Red Eyed China. Ten to twelve varieties of pole beans are raised, of which the best are Dutch Case Knife or Giant Wax Podded.

HARVESTING AND BALING HOPS.

Much care is required to prepare the crop for market. The first is clean picking; the next is to have them fresh when they are put in the kiln, as they will heat in sacks, if crowded, in four hours in hot weather. If sacked in the fore part of the day, but one box should be put in a sack, the sack spread its entire length on the ground, and no pressure allowed on them. When they are put on the kiln floor they should be spread evenly, and a fire put under them at once, and the heat raised to about 180° Fahrenheit, and remain there four or five hours, when the hops next the floor will begin to dry; then the heat should be slowly reduced to about 160°. When dry enough to turn, which is when the top hops have commenced to get dry, so that they are getting lighter, they should be carefully turned over.

The sulphur should be used (the first of the season) at the rate of about one and a half pounds to forty boxes; but during the last of the season the amount should be increased, as then the hops are not as bright. In using sulphur the steam should be well started on the hops first, so that they are quite damp; then it should all be burnt at once on the stove in a large dish like a dripping pan, that it may burn quick, so that the fumes may be forced through the hops at once.

After turning the hops, the heat should be gradually reduced to about 130°, as they will thereby be rendered tough, and no danger of overdrying or the lupulin being crystalized, which renders it nearly worthless. After being dried so that at least seven-eighths of the stems on the inside of the hops are entirely dry, they may be shoved from the kiln to the cooling floor, and from there (when another kiln full is ready) to the store-room.

In baling, care should be taken that the corners and outside are well packed in the press, that the bale be of good shape, the sewing well done, and the selvage edges just drawn together, so that the bale will all be of a size. When completed the name or initials of the grower should always be put on the top or bottom side of the bale, so that when standing up it can always be seen. One thing every hop grower should remember—that his hops are always made or spoiled after they are ready to harvest.—*Rural New Yorker.*

POISON PIPES.—The Boston *Journal of Chemistry* cautions the public against the use of *galvanized iron pipes*, and says instances of severe poisoning have occurred in consequence of using them.

MUCK AND ITS USES.

During August and September there is generally a time when peat, or what is commonly called muck, may be more conveniently and cheaply collected than at any other portion of the year. In August the streams are comparatively low, and, of course, meadows and swamps have less water on or in them, and may be travelled over by teams with safety. All favorable opportunities, therefore, for collecting muck should be improved by those who believe in its efficacy as a manurial agent.

Where muck abounds on lands which are usually overflowed by autumnal rains, it is good policy to throw it up in heaps to be hauled off at a later season, or at any time during the winter. Another advantage in this process is, that the water becomes drained away from the muck, and thus reduces the weight to be carted from one-third to one-half, at least. Good muck, thrown out in August, and overhauled once or twice, will be fitted for use in the cattle stalls, or yards during the winter, or for composting in the barn cellar. When this is thoroughly done, one cord of muck and two cords of droppings from the cattle leanto, will be worth as much as three cords of the latter alone. We have no doubt of this, after a long use of one-third muck mingled with barn manures and a careful observation of results.

The common opinion seems to be that muck is valuable *only* upon sandy land. This is, we think, an error. It may be more valuable on such land than on heavier soils, but its use will increase the amount of crops on any soil, —even on the very meadows from which it was taken. Dig it out, dry it, and spread it over the surface of the same meadow from which it was taken, and a perceptible difference will be seen in future crops. In order that the experiment may be a fair one, spread it where the meadow has not been affected by draining off the water in taking out the muck which is used.

Clay loams, or even compact clays, may be greatly benefited by an admixture of good muck. It will not only supply needed vegetable matter, but exert a mechanical influence, so that, combined, they give a new power to the soil to produce crops. And this power will not be merely a temporary one, but will be likely to be more permanent in its influence than half as many cords of common manure would be.

On what are called granite soils, that is, the usual uplands of New England, good muck will have a quick, lasting and excellent influence, giving to the land a darker color and a more mellow condition. If used in the garden and well mingled with the soil, the growth of all plants within its reach will be greatly promoted. On their roots reaching it, they will soon assume a darker color, and grow vigorously, frequently outstripping other plants in their immediate vicinity that are not favored with muck.

There is evidence which substantiates beyond all doubt the correctness of these statements. A volume might be filled with it. At present we will refer to only one authority.

Prof. S. W. Johnson, chemist of the Connecticut Agricultural Society, gives an analysis of air-dried peat, and one of well-rotted manure, moist from the heap. The first observation he makes upon these analyses, is, that the peat contains five times as much organic matter, and four times as much potential ammonia as the yard manure. 2d. It contains more lime, magnesia and sulphuric acid than yard manure. 3d. It is deficient in potash and phosphoric acid. We see thus that peaf and yard manure are excellently adapted to go together; each supplies the deficiency of the other.

HORSES IN FLY-TIME.

"A Merciful Man is merciful to his beast"

Every exertion a horse makes costs money to the owner. If he travels ten or fifteen miles a day, regularly, it will cost nearly double to feed him, that it would to feed one who is taken out for a little exercise only.

So it is with him in the stable. If it is light, and the air is confined, flies, in any number, will find him and become his tormentors during nearly all the time of daylight hours. There is no rest for the poor animal. He cannot get away from his tormentors. He pounds the floor incessantly to beat them off, breaks the planks that he stands on, and fatigues himself with constant exertion in trying to protect himself.

The horse does not reason as Esop's fox

did, when the flies tormented him more than the trap by which he was held. A friendly swallow proposed to drive them away, "Oh, no," said the fox; "these have their fill; drive them away and another hungry swarm will succeed, and rob me of every remaining drop of blood in my veins." So the poor horse stamps with his feet, switches with his tail, and swings his head from side to side, while hungry swarm after swarm succeed each other, until darkness compels them to suspend their voracious attacks. So the horse requires more feed in consequence of this exertion, and will often lose flesh, though working but little and fed highly.

Now all this is unnecessary, and ought not to be so. A little care, and a very little genius, will prevent it all.

Throw open the windows, and hang over them an old piece of carpeting, horse-blanket, or any other cloth that will exclude the light. Keep the stalls dark, but admit light enough before the horse to enable him to see clearly, if possible. In very hot weather, close the doors and windows during the day and open them at night.

In this arrangement, horses will stand just as quietly in their stalls through the hot weather as they do in the winter. They can stand at rest or asleep at will, eat less, and are better able to work than when constantly tormented by flies.

It is a matter of surprise that so many persons—persons who are great lovers of the horse, too—neglect these faithful animals in this particular. They see that they are well fed and groomed; that they are not driven too hard, or suffer from cold, and yet allow them to be *eaten alive* during the heats of summer!

In some neighborhoods, the stamping of horses in the stables may be heard all around during all the long summer days. On some farms the noise is as familiar as the cricket's song in an August evening. A radical change in this matter ought to take place everywhere.

When on the road, or on the farm at work, the horse is in a defenceless condition. He is buckled up, strapped up, and hitched up, so that he can scarcely turn right or left to defend himself, and yet very little is done to protect him from annoyances which sometimes well-nigh lead him to madness. In passing through a piece of wood in a hot day, we have seen yellow flies dart upon the horses in a shower, and in many places where they struck a drop of blood would instantly follow. When reined up by the check so that their heads cannot reach the ground, they sometimes drop upon their knees, and plunge the nose into the soft earth, to drive off some insect whose sting or bite becomes unbearable. All this is allowed, when most of it might be prevented by a few yards of the thinnest cotton cloth, or nets, or grass cloths made for the purpose.

If an "ounce of prevention is better than a pound of cure," we wish the Society for the Prevention of Cruelty to Animals would urge these considerations upon all owners of horses.

The following formula is given in one of the late Dr. Dadd's books, to protect animals against the torture of flies and insects:—

Walnut leaves	4 ounces.
Lobelia leaves	4 "
Boiling water	1 gallon.

When cool, strain it, and add four ounces of the tincture of aloes, and apply a small quantity to the surface by means of a sponge.

PEAS FOR PORK-MAKING.

New England farmers have always raised peas for pig-fattening, often in connection with oats. The following good word for peas we find in Mr. Harris' book on the Pig, which, as he served his apprenticeship at farming in England, is probably based on English rather than Yankee practice.

Few things would pay a grain growing farmer better than to raise peas for his pigs. No matter how "buggy" the peas may be, the bugs or beetles remain in the peas until about the first of November; and when the peas are fed out before this time, the pigs will eat peas and bugs together, and there will be but little loss. Nothing makes firmer or better pork and lard than peas, and the manure from pea fed pigs is exceedingly rich. A heavy crop of peas, too, is a capital crop to produce winter wheat. They will smother the weeds, and if sown early, are off the land in good season to allow thorough working of the land before wheat sowing.

If other food is scarce, a few of the peas may be cut in June, as soon as the pods are formed, and fed green to the pigs, and a daily allowance may be fed until the peas are fully ripe. In fact many farmers feed all their peas to the pigs without threshing. But this is a wasteful plan. When the peas are ripe,

pigs will do much better on them cooked, or at least soaked in water twenty-four hours before feeding. And in addition to this advantage, pea straw, when well cured and carefully harvested, is nearly as good for sheep as clover hay, and certainly will much more than pay the expense of threshing. A large farmer in Michigan who has made himself and his farm rich, attributes his success principally to growing a large quantity of peas every year and feeding them to pigs. He threshes the peas and cooks them, but does not grind them, as he thinks cooking is cheaper and better than grinding. The manure from his pea-fed pigs has made his farm one of the most productive in the State.

Turnips.—The venerable John Johnston, has recently written a letter to the *Country Gentleman*, in which he says, roots can never be raised to a large extent in this county unless wages were as low as in Germany or Denmark. The feeding out enough of roots to fat fifty head of cattle would cost more than would pay at present price of labor. Four quarts of corn meal will do more good to a steer than 120 pounds of turnips, in my opinion. If roots could be fed off with sheep in the field in winter, then I would say raise them. Corn can be raised for less labor, taking feeding and everything into consideration, than roots, and we have also the corn stalks which make excellent fodder if properly taken care of.

For the New England Farmer.

TO MAKE AN UNDERGROUND CISTERN.

BY B. LIVERMORE, HARTLAND, VT., CEMENT WATER-PIPE LAYER.

Many people have buildings so situated that it is difficult to bring water to them in pipes, or the spring water is hard and not suitable for washing purposes. For the benefit of such I will endeavor to give written directions, by following which they may make the best of cisterns at little expense.

The first thing to do is to find out the quantity of water we need to give a permanent supply. For a common family 40 or 50 barrels is sufficient.

Second, to ascertain the size of a cistern which will contain the number of barrels of water needed in three months. We seldom have three months without a supply of rain to replenish the cistern. To ascertain the number of barrels which a round cistern will contain we have a short, correct, and convenient

Rule.—Square the diameter, and multiply the product by the decimal fraction .1865, which will give you the contents, in barrels, one foot deep; multiply this by the number of feet the cistern is deep, and we have the contents of the cistern in barrels and fractions of barrels.

Example.—What is the capacity of a cistern in barrels six feet in diameter and six feet deep?

	6
	6
Square of diameter of cistern, ...	36
Fraction, ...	.1865
	180
	216
	288
	36
Contents, in barrels, one foot deep	6.7140
	6
Contents, in barrels, six feet deep	40.2840

Or forty barrels and a little over a quarter.

Example 2d.—What is the number of barrels that a cistern will contain eight feet in diameter and nine feet deep?

$$8 \times 8 \times .1865 \times 9 = 107.42 \text{ barrels.}$$

Third, to locate the cistern. The cistern should be made in the place most convenient for the water to run into it from the eaves of the house, and to the place where the water is to be used or drawn out.

It should be made in the solid earth, and at least four or five feet from the cellar wall.

Fourth, to dig the cistern. The way we begin the digging of a cistern depends upon the way it is to be covered: whether with flat stone or plank, or arched with brick or cement. If it is to be covered with flat stone or plank, we begin with a circle two feet or so larger than we intend to have the body of the cistern, and after digging about 18 inches deep, we then strike a true circle, just the size we wish the body of the cistern to be, and dig perpendicularly and as smooth and true as the ground will allow. After having dug as deep as you wish the cistern to be, and made the sides as smooth as you can, it is ready to plaster. We commence to plaster the cistern by mixing in an old tin pan, water and cement, to the consistency of milk. Hold this pan near the wall of the cistern, and with a shingle, or something similar, flirt this cement wash against the wall till it is completely wet. In a short time this will form a crust on the most loose and sandy ground, so that common cement mortar may easily be put on with a trowel. We make the mortar by mixing together cement and good plastering sand, and wetting them with water till it is of the consistency of common plastering mortar.

To put the mortar on the walls we use a common brick trowel, because we can make the plastering on an uneven surface nearer of a thickness than we can with a plastering trowel. We go over the walls where the ground is such that the surface is made smooth with one coat; if not smooth, with two or three coats. Then we make a mortar of clear cement and water and go over as smoothly as may be, and the sides of the cistern are finished.

The next thing is to cover it. If planks are used, we saw them the right lengths, leaving

usually at one side a man-hole to get down into the cistern and to let the water in from the eaves,—18 inches by 21. We make the man-hole at one side of the cistern because we can get it usually nearer the house and more out of the way, and it is easier covering it in this way. After the planks are cut we wet them thoroughly all over with cement, and water to preserve the wood. Place them on the cistern, and point up with mortar underneath the plank.

The next thing is to put in the bottom of the cistern. Get four or five flat stones a foot or so wide, and bed them down carefully with mortar in the bottom of the cistern. These are to rest the ladder on, and to stand on while you are plastering the bottom. These stones should be washed clean, so that the cement will adhere to them. Now scoop out a place that will hold three or four quarts. This is to be used to wash the dirt into when the cistern is cleaned out. Put an even coat of mortar of one half sand and one half cement about an inch thick over the bottom, and finish with a coat of clear cement.

Make a box for the curb around the man-hole, and the cistern is done.

Some ground composed of sand and gravel will not allow the digging to the depth of the cistern without caving and falling in. In this case, I dig as deep as the ground will hold up, and then put on the cement, wash and plaster. Then dig again and plaster—so continue till the depth desired is attained.

In ground where there are stones so large that we cannot make an even surface of wall, we plaster over the uneven surface and over stones which project beyond the surface, and into places in the walls where large stones come out, being careful to get a good thickness over all parts.

To attach a pump to a cistern. When the cistern is within a short distance of the cellar, and the ground is not stony, we bore a hole under the cellar wall to the cistern, and run the pipe through. We make an instrument to bore this hole with by taking a piece of sheet-iron, cutting it about 4 inches wide and 10 long, bending it into the shape of a pod augur, and nailing it on the end of a straight stick. With this the distance of 30 or 40 feet can be easily bored. This saves digging a ditch, and secures the pipe from the frost.

A cistern should not be covered with plank when flat stone can be had; but as we seldom find a stone large enough to cover the whole cistern, we usually place one stone on each side of the cistern, leaving a space about 18 inches wide across the centre, then place thin stones across from one of these large ones to the other, leaving the man-hole open, point up carefully under the stones, make the curb, and cover about 18 inches deep with earth.

A good plank cover will last some twelve years, but when it is old it is dangerous going into the cistern, as the plank may be decayed and fall in. It is difficult to cover a cistern so that it will be tight and proof against surface water, worms, &c., either with plank or stone.

The best covering is a cement or brick arch, which can be made as tight as a jug to the top of the ground, and is perfectly durable. To arch the cistern with cement or brick, the whole digging, from the top of the ground to the botton, is of the diameter of the cistern. We plaster the walls as high up as the place where we wish to begin the arch. Above this we cut a groove some 2 inches deep and 8 wide,—thus:—

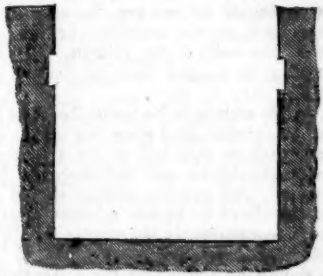


FIG. 1.—Showing the groove in cistern to be arched.

We now embed four flat stones in the bottom of the cistern for four posts to rest on to support a frame to build the arch on. These posts may be quite small. We place two timbers across the top of each two posts, and cut two boards in shape of the arch which will just reach across the cistern 18 inches apart.

FIG. 2.—Form of arch-boards.

We then cut two shorter boards in the same shape to go between these long ones and the sides of the cistern. These arch boards we place across the timbers.

The position of the posts, timbers and arch-boards are shown by the following illustration:—

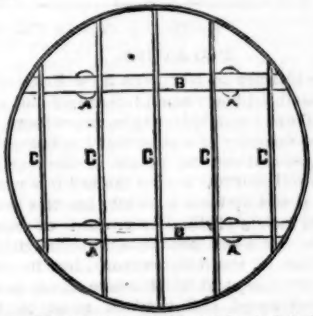


FIG. 3.—The posts are indicated by A A A A; the timbers by B B, and the arch-boards by C C C C C;—our engraver having put one more arch-board into his cut than Mr. Livermore had in his drawing.—ED. FARMER.

For a cistern six feet in diameter a board ten inches wide is sufficient for the longest arch boards. After these arch boards are placed on, we take barrel staves and nail on to them, —making a roof,—leaving a man-hole. We now make a frame to go around the man-hole of boards about four inches wide. Place paper on the roof to make it tight, so the cement mortar will not get through the cracks. If it is to be covered with cement we make a mortar of gravel and cement, equal parts, and cover it over an inch thick; then mix up mortar or grout, putting in at first twice, then three, and at last four times the quantity of gravel and coarse stone, and place it on with a common shovel till we get the arch about 4 inches thick at the man-hole or top, and 7 or 8 at the walls of the cistern. Let this remain a day or so, and then the bottom can be made.

If a brick arch is to be made, begin at the walls of the cistern, and place the brick on in cement mortar as common arches are made. The brick should be wet before being laid with cement, and cement mortar should be used within fifteen or twenty minutes after it is wet up, consequently the mortar should be be made in small batches.

Care should be taken that the cement used in making an arch is of good quality. There is much poor and worthless cement in market, which will not hold in an arch, and one made of such material would be a dangerous thing.

It requires a year or so for cement to harden perfectly, and a cistern made of it does not become water-proof under three or four weeks. When the ground is a firm loam, a good workman will require about a barrel and a half of cement to make a cistern to hold forty barrels, if it is covered with stone or plank. If the ground is stony or of loose gravel, more cement will be required. If the top is cemented, such a cistern will require two barrels of cement.

I know of cisterns made by my father on the foregoing plan over thirty years ago, which are still in perfect order.

For the New England Farmer.

POTATOES.

Their Culture in Northern New England.

I take the liberty to add through the columns of your valuable paper, *my mite* to the immense quantity of matter that has been published pro and con the potato in the various agricultural journals during the last few years.

It is probably known to all that this indispensable article of food is a native of South America. It was introduced into the British Dominions in the 16th century, but it came slowly into use, and at this late day it is not much cultivated and used in some of the countries of Europe. Yet it has proved to be, in the United States, one of the greatest blessings bestowed on man by the Creator.

In northern New England the soil is better adapted to this esculent tuber than any other part of the United States. Therefore to my fellow-members of the agricultural profession (for I believe the farmer's vocation to be something besides a merely mechanical occupation) I will give my *modus operandi* in cultivating the potato—both the early and the late varieties.

I select potatoes for early planting from those that arrived at maturation or ripeness first the previous year—taking those of a medium size, about the bigness of a hen's egg, and after thoroughly wetting them, place in a tight box near the stove, or in some warm position where a tolerably even temperature is maintained. Care should be taken that they are wetted every few days to keep the sprouts in a moist and growing condition.

I treated the early Goodrich and Chenangoes in the above manner, putting them to sprout the last of March and planting them the first day of May. The ground previous to harrowing was manured a little, and a half of a pint of the following mixture was put in the hill; one part phosphate (Bradley's) one part gypsum, and five parts leached ashes and hen manure. They were hoed twice, and the last of June I dug full grown but not perfectly mature potatoes. By treating the Climax or Early Rose in the same way they will arrive at maturity from ten to fifteen days earlier.

Another Method

Is to mix fine horse-manure, sawdust and loam together, and place alternately layers of the mixture and of the potatoes. If furnished with a copious supply of water, this mode will give the potatoes a more rapid growth before transplanting, but it requires more labor, the horse manure is offensive, and the difficulty of transplanting without injuring the shoots and fibrous roots is very great.

The essential requisites in either of the above modes are water and heat, the former being the moving medium that conveys the nourishment from the surrounding body of the seed to the germ or embryo, and the latter aids germination. Hence the first condition of germination in any plant is an exposure of the seed to moisture.

General Culture of the Potato.

The seed should be of medium size, undecayed and uncut. The ground should be mellow and of good fertility; neither too rich nor moist to produce *good* potatoes. The quality is generally injured by manuring with fertilizers in which animal manure predominates. When such manure is composted with muck, and both are well decayed, the effects are good. A good and cheap fertilizer is made by slaking one cask of lime with water, and then stirring in one bushel of fine salt; if this mixture is moist or mortar-like add loam enough to make dry. Put one half pint in the hill at planting.

Plaster and ashes are good fertilizers. Every farmer should experiment on his crops to ascertain what fertilizers are best adapted to *his farm*, and not rely wholly upon the experiments of others.

In all cases plant as soon as the season will permit, provided the ground is dry enough to work without injury, but beware of stirring the earth when solid—particularly clayey soils—as one year's cultivation of it when not sufficiently dry, requires the combined influence of the frost and sun for five years to ameliorate it enough to bring it to its original fertility.

The hills should be broad and flat with an elevation of sufficient height to allow the potatoes to grow to maturity without growing out of the hills, as the influences of the sun and air injures their quality.

Early Harvesting

of potatoes cannot be too strongly urged upon the farmers of New England. Admitting that the potato crop of 1869 amounted to 3,850,000 bushels in New Hampshire, and putting the loss from disease after harvest at one third, which is an under-estimate, the loss amounts to 1,283,000 bushels, or upwards of $641,500, which might have been saved to the producers, had the crop been harvested before the heavy rains during the early part of October. Many dislike to harvest potatoes when the weather is warm, but after witnessing the bad effects produced by heavy rains during the last and previous years, farmers are becoming convinced that the sun injures the quality less while drying, previous to storage, than the rains that are sure to come at some time during the early part of autumn. It would not be advisable to let them remain exposed to the hot sun a great length of time after thoroughly dry, but remove them to a cool and dry place as soon as convenient.

In a future number I will, if you desire, give some account of the method we have pursued in cultivating *one* variety of the potato without change of seed for thirty years.

Pittsfield, N. H., July, 1870. DRACOS.

BOARD FENCES.

Such farmers as use posts and boards for fence are aware by this time, that to keep any large amount of it in good repair, requires diligence and no inconsiderable expense. Good suitable fencing boards are now worth from $12 to $14 per thousand, and cedar posts from 12 to 15 cents each. This, together with the fact that poorly constructed fences need constant watching and repairing, suggests the importance of putting this material together in the most thorough and efficient manner possible.

In the first place, the posts should be well sunk in the ground, and if they are not more than four feet out of the ground, it is just as well, for a fence three and a half feet in height is better than one that is higher. Any creature that will jump over a good fence of such a nature, will manage by some means to break out of any enclosure, and is a fit subject for the shambles.

The boards should be no nearer than what is absolutely necessary to keep out the heads of the cattle. A tight, tall board fence is sure to be blown down by the winds of spring where the ground is soft.

Never use a poor board for fence against which cattle or horses run. Lumber should be carefully sorted, and all of an ordinary nature worked into one fence about the pasture for sheep or small cattle. A single defective board may be the means of creating as much damage as though every board in the fence had been of the same kind.

Spikes should be heated in the fire and turned into a vessel of oil while hot, which prevents rusting or breaking. Holes should always be bored through the cleats so as to insure soundness, and much depends upon the cleat, which is far better when not more than two inches wide, being less liable to warp and crack.

The present method of making a hole for the post in the earth with a bar, and then driving with a heavy maul, is far preferable to the old way of digging a hole and tramping the dirt about the post. Many say that it is not so well, and when you ask for their reasons, answer, "because it is done so quick." Judgment tells us that a post driven firmly into the solid earth by the force of a heavy maul in the hands of a strong man, is more fixed than another set by the old-fashioned method of digging.

We have sometimes experienced a little difficulty in satisfying our minds on dry land, but Mr. Ira G. Smith, of this town, informs us that he has discovered a way that works well. He makes a hole with a bar as in any case, puts in the post which fits the hole as near as may be, and then turns about it a quart or two of water, which softens the ground and the post is easily driven "home."

Fence that is built in this way will last upon dry ground until the posts are rotted off, and upon moist ground until the action of the elements and atmosphere have worn out the boards, if a little attention be given each spring to righting up any post that may be inclined by snow drifts or heavy winds.—*St. Johnsbury, Vt., Times.*

—The finest grades of Holstein and Normandy butter are the best in the London market and are worth 147 shillings sterling per hundred weight. Extra Irish butter, a fine grade, is worth in the same market from 108 to 112 shillings. The Irish butter is packed in oaken firkins, while the Holstein and Normandy butter is put up in small packages flaring at the top, similar to the Orange Co., N. Y., pail.

THE RYE CROP.

FARMERS generally consider the latter part of August the best time for sowing winter rye. If put in at this early period, it has time to germinate, and to root so strongly as to resist being thrown out by the frosts of winter, or to perish by lack of moisture, if the autumn should prove a dry one.

It is too often supposed that any poor, sandy soil is fit for the production of rye. That such land will frequently bring a fair crop of this grain, is true, but that does not prove that it will not be more economical to sow it upon a much better soil.

A soil made up of about 80 per cent. of sand, 18 or 20 per cent. of clay, and two per cent. of humus, (peat,) is as poor as should ever be devoted to a crop of rye. Such lands lack lime in some form, muck and clay, and would be greatly benefited by ploughing in green crops of rye itself, clover, buckwheat or something else of their nature. Where blue clay can be had conveniently, 30 or 40 two-horse loads to the acre would be worth more than a usual dressing of manure. Whether it be clay or green crops, the whole should be most intimately mingled with the soil.

Very fine crops of rye are frequently raised on granite soils, and even on alluvial lands that are not overflowed.

The idea does not yet seem to have taken possession of the farming mind, that living and dead plants contain the same elementary matters—that dead plants afford the proper aliment for living plants,—and that, consequently, the fertility of a soil will be increased or diminished in proportion to the quantity of dung or organic matter which is returned to it, compared with the quantity which is taken from it by cropping.

No complaint is so common among farmers as that of a want of manure; if they had that, they could raise all the usual crops at a profit. And yet, we are not left without the means of helping ourselves in this particular, in a very considerable degree. There are sandy acres within a gun-shot of many a farmer's door that are barren now, and seem doomed to perpetual barrenness in all the future. There are other sandy acres, in similar localities, that teem annually with rich crops of grass, grain and roots. If such lands can be brought into a state of fertility in one instance, they can in a thousand.

It is important that all lands near the buildings should produce abundant crops. Travel and transportation of manure and crops is then comparatively inexpensive; they are also where they will be constantly overlooked, and thus more likely to be well tended, while the rich surroundings of the buildings will give the farm an increased money value.

A little capital and a little skill is what is required to bring some of these barrens into a fair state of fertility. If the capital is small, begin with an acre, or a fourth of it; plough at any time and sow any seeds that will bring vigorous plants, and when they have attained their growth to the blossoming period, plough them under, never allowing the plants to seed. Continue this through an entire spring, summer and autumn, and so go on, from year to year until the soil will bring a crop of clover, little or much, then turn that under, and the land will probably be in condition to yield a fair crop of beans or corn. The capital thus invested will be chiefly in the labor of man and that of the team, and will not be felt like an investment of money. In this way, it certainly is possible to get sandy lands into a condition of profitable fertility, and perhaps save much cost in travelling off to cultivate distant fields.

Some persons delay sowing winter rye until September, and it often does well seeded early in that month. But old Cato's maxim is a safe one:—"Get in your harvest two days too soon, rather than two days too late."

AGRICULTURAL FAIRS.

Now that we have got through the season of College Commencements and School Exhibitions, the "Fairs" are fast approaching. Some idea of the great number which are to be held this fall in all the States of the Union may be formed from the imperfect list we publish of those in New England alone. In Massachusetts there are thirty or more county societies and perhaps a greater number of town and local organizations which hold Fairs. In the other New England States the proportion of fairs to population is probably about the same as in Massachusetts. To the man-

agers of each of these Fairs, and the exhibitors and receivers of premiums, the local reports are matters of great interest. But the proceedings and reports of each Society are so similar to those of all others, that they have comparatively little interest to those in other localities. Before the season is over, these reports will become very tedious reading even to the farmers themselves.

Now it is of very little interest to Mr. X, that Mr. A's trotting horse made his time in 2.30, and Mr. B's in 2.35, or that Mr. C took the first premium for his plate of apples, or Mr. D the second, or that Mr. E took the premium on squashes. But it is a matter of some interest, that there was a good show of horses, and that many roadsters indicated increased attention to their blood and breeding, and that there was a better class of farm stock than was ever exhibited before—that there was a good crop of apples, and that their size and beauty indicated increased attention to their cultivation, and that there were some new varieties of vegetables exhibited, that promise to be a valuable addition to those we now have.

This matter of reporting for the Fairs has become so extensive, and is attended with so much labor, and occupies so much space that is wanted for subjects of more general interest, that it seems that some change is needed in the method of presenting the results to our readers.

If we can devise some plan by which the important features presented at each Fair, and the points which will be of general interest and useful to the community at large, can be shown in a condensed form, and parts of merely local interest left to be learned from the local reports, will it not be an improvement that will be appreciated by all readers?

Most of the State, and many of the local Fairs have some marked features; as, for instance, in Vermont the leading features may be horses and sheep; in Maine, cattle and horses; in Massachusetts, dairy stock and fruit. These features might be brought out and discussed, the progress or failure of the year exhibited, the interest manifested by the people, and the means adopted to promote their leading pursuits spoken of. Other things, belonging to the several Fairs would be, of course, matters belonging to them in common. These peculiar features would be of general interest. So if any new or special measures were initiated by any society, they would be described and discussed,—as any special premiums, any new implements, new methods of harvesting or cultivating.

The written statements of the takers of premiums usually contain the cream of the reports, and if they could be published, as they should be, soon after the Fairs are held, and the substance of them condensed into a small compass, they would be of great value and interest to all readers of agricultural papers. We should all be interested to know how Mr. A raised his thirty bushels of wheat to the acre; how Mr. B fed and treated his cow that made sixteen pounds of butter per week; how Mr. C managed his fine colt; how Mrs. D made such nice bread, and Mrs. E her "gilt-edged" butter.

Such statements set us all thinking, and comparing these methods with our own and with those of our less successful neighbors. A selection from such statements would be much more profitable in the pages of an agricultural paper, than after dinner speeches, or spread-eagle orations by politicians who flatter farmers for their votes.

The number of Fairs to be reported is annually increasing, and unless we can adopt some condensing process by which facts and thoughts can be compressed into a small compass, our whole paper will be occupied by agricultural reports during several of the autumnal months.

We hope our many correspondents will bear these remarks in mind, and send us only interesting facts, and those for the most part of a general character, omitting in general, lists of names and premiums.

Now that every agricultural Fair is on the line of a railroad, greater numbers than ever will attend them. They are among our established institutions. It is to be hoped they will be kept in the hands of agricultural and public spirited men, and not fall into the hands of jockeys, prize fighters, or politicians, who will manage them for their own private interests rather than for the public good.

—It is said that Dartmouth College, Hanover, N. H., has received nearly $100,000 for its Agricultural School. It has bought a farm of 200 acres. There are seven in the agricultural school.

LIVE STOCK IN OHIO.

The county assessors of the State of Ohio have recently published their annual tabular statement, required by law, of the number of horses, cattle, sheep, hogs, and other animals returned for taxation on the first of April. We copy from the Cincinnati *Gazette* the following statement of aggregates as compared with those of several previous years.

	Horses.	Cattle.	Sheep.	Hogs.
1864	699 892	1,436,993	. . . .	1,616,516
1865	678 476	1,244,327	6 305,796	1 455,692
1866	683,767	1,268 698	7 036 885	1 817,151
1867	691,861	1,426,115	7 556 507	2,085,086
1868	710 375	1,521,266	7,688 845	1,812,572
1869	704,578	2 492,581	6,272 640	1,455,943
1870	704,664	1,521,421	5,062,028	1,720,113

From this it will be seen that in horses there is no increase of consequence, while beef cattle have increased only 28,840. There has been a slight decrease in mules, and a falling off in sheep of 1,220,612. Hogs increased 264,160.

The *Gazette* remarks:—

The consumption of horses and beef cattle during the war was very great, and from this, in addition to supplying the current demand, the State has not yet been able to recover. The annual increase since 1865, it is seen, has been very slow; but it must be borne in mind, that a large number are shipped out of the State every year. The figures do not give the entire production, but merely the number remaining on the 1st of April each year.

The number of cattle in 1861 was 1,902,772. From that year there was a steady decrease until 1865, when 1,244,327 were returned. Since then, with the exception of 1869, there has been a gradual increase, but this year the number is 182,659 less than it was in 1861. This accounts for the dearness of beef, as compared with ante-war prices, and shows that it will require several years yet to recover fully from the effects of the war. The high prices paid for products, and everything else during the war, created the impression, that while two million men were in the field consuming and destroying, the country was increasing in wealth; but these statistics we are exhibiting, show that in actual wealth we have fallen behind, and that the State of Ohio is not up to the position to-day that it occupied in 1860.

The most extraordinary decrease is in sheep. The great demand for woolen goods, and the high price of wool during the war, stimulated the production of sheep, and in 1868 the maximum was reached, when the stock in Ohio was 7,688,845, against 3,934,763 in 1861. The collapse in the market for woolen goods, caused by the termination of the war, and the fall in prices of wool, destroyed the prospects of sheep growers. Ohio farmers have been disposing of their sheep, which have decreased over 1,500,000 in two years, with a continued downward tendency.

In 1861, there were in the State, over six months old, on the 1st of April, 2,242,814 hogs. High prices, consequent upon the war, and good corn crops, stimulated the production, and in 1863 the number increased to 2,765,900. This was the maximum, and since that time there has been an average decrease until 1866, when the minimum was reached, the number being 1,455,943. This year, however, shows an increase of near 300,000 head. The causes which reduced the supply of hogs differ from those that affected cattle. The supply of hogs varies rapidly, because the number may be so readily diminished or largely increased. Give farmers one or two years' notice, and offer sufficient inducements, and the supply will be equal to any probable demand. This under ordinary circumstances. But for several years the cholera made havoc among the hogs, and so discouraging were the circumstances that farmers largely abandoned the business. This accounts for the rapid decline from 1863. To a great extent, however, the cholera has ceased, and hogs having for two years commanded very high prices, farmers are again giving their attention to the business, and Ohio is now in a condition, if the corn crop turns out as well as it promises, to furnish a large crop of hogs for next winter's market. The returns to the Auditor include only those over six months old on the 1st of April. Large numbers, therefore, not included in our figures, may be made ready for market by January next.

BRANCH CHEESE FACTORIES.

In the article on Cheese Factories, by Mr. Bliss, as well as in that by Mr. Brown, of New York, recently published in the Farmer, it is remarked that the tendency has been of late to small establishments for manufacturing cheese, and that some of the larger factories, which originally took milk from farmers scattered over a large territory, had already established branch factories to avoid the inconvenience and expense of transporting milk too far. During a recent excursion among the cheese daries of Herkimer County, the editor of the *Utica Herald* visited a factory which was built by our correspondent, L. N. Brown, Esq., and which has three branches now in successful operation. The *Herald* says:—

The Eagle Cheese Factory is situated on the easterly skirt of the village of West Edmeston, and is one of the best appointed and best managed factories in the State. We believe it is the only factory which has successfully carried out the branch system, which originated with the builder of this factory, L. N. Brown, Esq., who was the pioneer of cheese factories in this portion of the State, and is a man of extensive and varied experience in all departments of the cheese-making business.

The Eagle has three branches, all within easy drive of the main factory. At each of these branches is run one of Ralph's large, self-heating vats, which are admirably adapted to this purpose. The cheese is made under the supervision of the manager, who has his headquarters at the factory. The rennet, coloring and bandages are prepared at the factory, and delivered once or twice a week at the branches, when the cheese is taken from them and drawn to the large curing room. In this way the cheese made at four different places and drawn together and cured in one building are remarkably uniform in size and quality. Without knowing the fact, or looking at the brand, no one would have suspected the cheese which we saw on the ranges of being made at four different places by four different operators. They were firm, meaty and buttery, and contained on their clean faces an assurance of the truthfulness of the assertion of

one of our leading buyers, that he never lost money when he bought the Eagle. The Eagle and branches were making sixteen ninety-pound cheeses a day.

AGRICULTURAL ITEMS.

—One California sheep ranch includes 200,000 acres.

—The excursions of the bees to collect honey are variously estimated at from one to three miles each, and they are supposed to make each about ten trips a day.

—Julius Riley, of Aurora, Portage county, Ohio, has two geese that he has had in his possession upwards of forty years. He purchased them about the year 1829, and they were at that time "middle aged geese."

—The Bucyrus, Ohio, *Journal* has measured an honey comb which was four and a half inches through, the cells on one side being three inches deep and on the other side an inch and a half, all one mass of sweetness.

—The editor of the *Horticulturist*, says that he has known quite a number of instances in which old orchards apparently dying out, have been brought back to fruitfulness by the liberal use of wood ashes, in connection with stirring the soil.

—A correspondent of the Chicago *Tribune* mentions a case where cows were poisoned by eating potatoes that had the sprouts on. He says before old potatoes are fed the sprouts should in all cases be removed.

—The crops are suffering severely throughout Cape Cod, in some parts of which no rain has fallen for six weeks except a slight shower, and prospects of the cranberry crop are said to be very poor, owing to the want of moisture.

—The New Haven *Register* says: "What we know about gardening" will be interesting. The "senior" has picked, this season, three cucumbers, two cauliflowers, seven ears of corn, and four tomatoes, which cost him $4.48 each.

—A Chicago journalist divides the inhabitants of that great hive of population into two classes—those who follow life insurance and those who do not. The latter class, he tells us, is too insignificant to bestow any attention upon.

—Pleuro-pneumonia has broken out among Mr. Dinsmore's imported cattle, at Poughkeepsie, N. Y., and it is feared that fatal results will follow. An Alderny bull, valued at $1,000 is in a critical condition.

—The General Omnibus Company of Paris employ 10,000 horses. They are nearly all Percheron stallions purchased at five years old. A little over two per cent. died in 1869. Hay and oats are fed. They require shoeing once in about 27 or 28 days.

—The toad, which is an efficient bug hunter in the garden, is said by the *Ohio Farmer* to eat honey bees with an equal relish, and bee keepers are advised to arrange the lighting boards of the hives in such a manner as not to be accessible to his toadship.

—The negro in Tennessee, says the Memphis *Ledger*, is fast becoming proprietor of the soil he formerly tilled for his master. About 500 negroes own farms in the vicinity of Memphis, and all their farms are well cultivated, while the farms of a great many white men are covered with weeds.

—The leading agricultural periodicals of Great Britain are the *Mark Lane Express*, *The Field*, *Bell's Messenger*, *Farmer's Magazine*, all published in London; *North British Agriculturist*, and the *Farmer* published at Edinburgh, and the *Irish Farmer's Gazette*, Dublin.

—A letter from Claremont, N. H., says: "Such a dry time has not been known here since John H. Warland edited the Claremont *Eagle*, some twenty-five years ago, when he said it was so dry that he had to soak his pig to make him hold swill."

—The Editor of the New York *Horticulturist* says there are enough acres in blackberries to supply Philadelphia, New York, and Boston, and thinks it not wise to advise any more to engage in the business. He thinks there are near one thousand acres in blackberries within thirty miles of Philadelphia.

—An implement maker in France has constructed a species of plough, by means of which the beet bulbs are lifted from the ground and thrown aside by a swinging mold-board, and then topped by women and children who followed the machine. One of these, worked by a man and a pair of horses, will dig about two and one-half acres per day.

—It is stated in the *Oregonian* that a party of French, who had camped at Wilhoit's Soda Springs, killed a deer which was found to be literally alive with trichinæ. A number of families ate of it before the discovery. The discovery of trichinæ in venison killed in its "mountain fastness" has created quite an excitement among the hunters.

—The Diehl wheat, which has recently been extensively introduced into Michigan, is said to be liable to sprout and grow in harvesting when the weather is damp and moist, as it has been this year in that State. In some cases, the *Michigan Farmer* says, the shocks on whole fields of forty acres are almost green. Other varieties withstand the weather better.

—Stock from Southern California is being driven over the mountains, whenever practicable, in large numbers, to save it from the drought. Sheep are, for the same reason, being forced into market in larger numbers than usual. It has been decided to reduce a flock of 50,000 in the island of Santa Cruz to 40,000, in order to increase the

chances of saving the smaller number. The reduction will be effected by slaughtering 10,000, making the most of their pelts and tallow, and salting down the hind-quarters.

—From what Horace Greeley "knows of farming" he assumes that the Pine Barrens of New Jersey may be ploughed up and by the application of marl, swamp muck, oyster shell lime, and bone flour, be made to produce "fully sixty bushels of corn, thirty of wheat and not less than three tons of hay per acre." Can any body wonder that "book farming" is unpopular?

—To preserve a bouquet, a correspondent of the *Western Rural* says: Sprinkle it lightly with fresh water, and put it in a vase containing soap suds. Each morning take the bouquet out of the suds, and lay it sideways in clean water; keep it there a minute or two, then take it out and sprinkle the flowers lightly by the hand with water. Replace it in the suds, and it will bloom as freshly as when first gathered. Change the suds every three or four days. This method will keep a bouquet bright and beautiful for at least a month.

—About the 15th of June a cow belonging to Mr. Wm. Burnell of Swanton, Vt., gave birth to a calf, which in the course of a few days was killed and the milk of the cow saved. It was noticed that the milk was very thin and appeared to have no more richness than ordinary skimmed milk. And yet the cow appeared well, and the cause was quite a mystery. A month afterward, however, the cow had another calf, and since then her milk has been perfectly good.

—To illustrate the remark that there is more gain in time than in cheapness by the use of a good deal of our farm machinery, a correspondent of the *Hearth and Home* says "a neighbor of mine two years ago kept an accurate account of the expense of threshing his crop of wheat. He hired a six or eight-horse thresher and its attendant horses and gang of men. He put in his own men and teams and hired extra help, as most farmers must do at such a time. He fed the lot—horses and men—and his wheat cost him, for threshing alone, twenty-five cents per bushel."

—The improvement in the crops of Great Britain during the last half century has often been ascribed to the improved modes suggested by scientific and progressive agriculture, but a late number of the *Irish Farmers' Gazette* seems to give the credit to the importation of foreign, and the manufacture of home-made fertilizers. It thinks it questionable whether the annual increase of all the cotton, linen, woolen, and hardware together will balance the increase of produce arising from the yearly application of imported and artificial manure to British soil.

—In reply to a correspondent who expressed a desire for a book containing a full account, with illustrations, of all insects, the St. Louis *Entomologist* goes into a calculation as to the size of such a work. He assumes there are about 500,000 distinct species in the world. Allowing the description and cuts of each species to occupy a page and a quarter, he demonstrates by figures that 1000 octavo volumes of 625 pages each would be required for the work, making a row of books over 160 feet long, or enough to fill seven book cases six feet high and four feet wide.

EXTRACTS AND REPLIES.

FARMING WITH SIX HUNDRED DOLLARS.

In reply to T. E. P., of Newburyport, Mass., who asks for experience in regard to going on to a farm with $500 capital, and who wants to know whether he could get a living, allowing he should attend to his business, I will give my experience with about that amount of capital.

Thirteen years ago last spring, I bought a farm of two hundred acres for $7000. I paid $600 down, then borrowed $600 to buy stock and tools. I had fourteen years' pay-day. Besides meeting all payments when due, I have bought fifty acres more land for $1400, paid down. I am now in debt about $700, and have a farm worth $11,000, with stock and tools worth about $2000. Thus, with a good helpmeet, I have got a living by attending to my business—farming. A. F.

Bristol, Vt., Aug., 1870.

Remarks.—For brevity and conciseness of statement this communication is a model. In the expression, "my business—farming," is probably wrapped up one of the secrets of his success. Both he and his helpmeet understood their business; had learned their trade; were skilled workmen. We understood the inquiry of our Newburyport friend to be made in the interest of "raw hands,"—of those tired of village or city life and employments, and who had been attracted to rural pursuits by the poetry rather than the prose of farming.

We must take this occasion to invite "A. F.," as he has now broken the crust, and shown capabilities as a writer as well as a farmer, to dress up other facts of his experience for the benefit of the many who are beginning life under circumstances similar to his own.

SINGULAR CASES WITH COWS.

In the Farmer of June 18, we published a statement by T. B. Hart, Esq., of West Cornwall, Conn., in relation to a cow which manifested all the usual appearances of one just ready to "come in," when she refused her feed, her bag fell away, all the appearances alluded to disappeared, and the animal became poor and feeble.

We have since received a communication from "B. D. W." detailing a similar case that occurred in North Thetford, Vt., some years ago. In that case the cow was expected to calve in March, in which month her appearances were all favorable, and she was closely watched. About twenty days after her time, her bag began to diminish, and in the spring she was turned to the pasture, apparently in good health and condition, to fatten. In December she was slaughtered, when the bones of

the first calf, and another perfect calf about four months along, were found.

These statements were submitted to a medical gentleman who has furnished the following

REMARKS —Cases of the retention of the fœtus after completing the full time of pregnancy, in the human subject, have been reported, in which the soft parts have been absorbed, and the bony parts have been retained for years; the mother in the meantime enjoying tolerable health. These were cases in which the ovum was developed in the ovarian instead of within the cavity of the uterus in the natural way. A case occurred in this State some years ago, in which a fœtus was retained some years, and an abscess forming in the side of the abdomen, the remains of a fœtus were removed by a surgical operation. A woman is now living who went her full time,—one child was born and another retained, where it has remained more than fifteen years. She has had tolerable health.

Personally I have known no similar case in any of our domestic animals, but I know no physiological reason why it should not occur in them as well as in the human subject.

The fact of the cow referred to by "B. D. W." becoming again pregnant, while retaining the fœtus, is not without parallel in the human subject. In this case, if the facts are correctly stated, I have no doubt that there was an extra uterine or ovarian impregnation. It is to be regretted that there was not a careful dissection by a competent anatomist, when the animal was killed. There are many interesting facts yet to be ascertained in veterinary practice, which can be revealed only by post mortem examinations.

I hope you will hear again from Mr. Hart.

J. B.

MAKING A MARKET GARDEN.

I have about one acre of warm, sandy land, somewhat run down, which I wish to bring up to a fair state of fertility for a market garden, with the least possible expense. Can you advise me how to do it? What fertilizers shall I use, and how apply them, and in what quantity? E. L.

Long Plain, Mass., Aug. 10, 1870.

REMARKS.—For intelligence and shrewdness we presume that the market gardeners of the vicinity of Boston and New York will compare favorably with any business men in the country,—whether manufacturers, mechanics or merchants. Hence it is reasonable to suppose that their system of fitting land for profitable use as a market garden is about the cheapest and best that can be devised, under the circumstances. Stable manure, and a plenty of it, is used by them, with but a small amount of commercial fertilizers. We can give you no better advice than to learn how old market gardeners manage, and then follow their example. The richest and best land only is fit for a market garden. "Run down," "sandy land" cannot be put in condition to compete with old market gardens on heavy rich soil by any homœopathic doses of vest-pocket fertilizers. Even with very liberal applications of stable manure it will require some two years to bring it up to the required state of fertility, admitting the soil to be suitable.

If you are in earnest about making a market garden, we will say plough it pretty deeply and finely early this fall. Next spring harrow it thoroughly, and put on not less than ten cords, not loads, of stable manure and three "Brighton Artillery" loads of night soil. Plant cabbages the first year, cultivate thoroughly so as not to let a single weed go to seed or become established in the soil. The next year apply not less than six cords of manure, half broad cast, half in the hill, raise squashes, and exterminate weeds again, and your ground will be only in fair condition to *begin* to raise vegetables.

The NEW ENGLAND FARMER don't know of any cheaper or better way of making a market garden, and perhaps after you have tried the experiment with cheaper fertilizers, and a cheaper process, you will be less surprised than now at our lack of information.

TOUGH CHICKENS.

Will the NEW ENGLAND FARMER tell us, in its next issue, why chickens, after being kept on ice for three or four days, are tough and stringy? In the city they are always tender; but here we find them as described above, although bought of reliable neighbors. AN EMBRYO FARMER.

East Wareham, Mass., August 13, 1870.

REMARKS.—We are suspicious that your "reliable neighbors" rely a little too much on your embryonic condition, and that the tough and stringy chicken flesh that has been kept on ice three or four days, is owing to the fact that the eggs from which they were hatched were laid in an earlier Anno Domini than 1870. The city dealers in poultry are not "embryo" dealers. Educated to their business, they depend on their own judgment and knowledge in buying their goods, and not on "reliable neighbors." They know the difference between a small, old hen and a large, young chicken. It is hardly to be expected that a mere "embryo farmer" should be able to distinguish between the two, especially when offered by a "reliable neighbor."

CENTRIFUGAL THRESHING MACHINE.

A thorough trial of the Centrifugal Threshing Machine was made at my barn to-day, in the presence of some thirty farmers, representing all parts of the town, several of them being "old threshers." The unanimous opinion was, that the machine is a complete *failure*. Wheat, both that mowed and that reaped, was put through in a like unsatisfactory manner,—requiring much time and doing its work in an imperfect manner,—whilst none but a giant could turn it under full feed. Instead of threshing ten bushels an hour, it is doubtful if that number of bushels of wheat could be threshed in a day.

It was stated at the trial to-day, that one firm in Manchester N. H., had orders for nine hundred of these machines, but not one of them can now be sold in this town at any price.

The drought continues to "reign" triumphant. Corn and potatoes are feeling it now severely. Pastures are parched, and cows are failing in milk rapidly. P. C. TRUE.

Pittsfield, N. H., Aug. 10, 1870.

REMARKS.—We saw this machine threshing oats at Manchester last December, and watched its operations with much interest. Though well aware that the principle of the old saw "that one swallow does not make a summer" is applicable to machine-

ry, and that many which as models, or on first trial at actual work, give encouraging promise of usefulness, prove in other hands and on further trial, inefficient and worthless; we were led by what we saw of the Centrifugal Threshing Machine to form and express a favorable opinion of it. Favorable accounts of its operation have also reached us from various sources. We are therefore disappointed by our correspondent's account of its trial on his farm. Possibly this failure may be explained and accounted for. We certainly hope so, as we have felt much confidence that this little machine would meet the demand that has long existed for something between the slow process of flail threshing, and the complicated and expensive one of machine threshing, as generally practiced.

WORMS IN HORSES.

Will you please inform me what will destroy worms in horses? G. O. P.

Rockingham, Vt., Aug. 8, 1870.

Remarks.—Mr. Eli Powers of Brimfield, Mass., wrote to the Farmer last year that he gives poplar bark, cut fine, and mixed with feed. This he finds a perfect cure. Mr. L. H. D., of Cornish, N. H., says the best remedy he ever tried is to give his horses plenty of poplar poles to gnaw at their leisure.

Dr. Law, Veterinary Lecturer of the Massachusetts Agricultural College, says, give every morning, one hour before feeding, three drachms sulphate of iron and two drachms of assafœtida; and every night, for a week, throw up an injection of one ounce of turpentine, and ten ounces of linseed oil.

So far as medicine is concerned, we have much confidence in good wood ashes, say a gill mixed with cut feed, every other day.

But here, as elsewhere, an ounce of prevention is worth a pound of cure. Dr. Dadd says "It was customary in former times to give powerful vermifuges for the expulsion of these parasites, but the most rational method of treatment is to impart tone to the digestive functions, by the use of tonics, stimulants, and alteratives." Horses are often confined too much to dry feed. A few potatoes, fed to horses two or three times a week, are considered by some as a sure preventive of worms. Try experiments in feeding first, then dose as you think best.

PRUNING—BARK LICE—QUALITY OF FRUIT.

I noticed in the last Farmer (Aug. 20) an inquiry from "Backwoodsman," North Montpelier, Vt., as to the "best way to trim a young orchard;" also "how he should keep off the the bark lice."

Your "remarks" as to the true way to prune an apple tree, and in relation to the *time* it should be done, so well agrees with my own experience of several years in rearing a young orchard, that I will not attempt to add anything to your answer to that question.

But in relation to the other question "how shall I keep the bark lice off?" which question I have noticed has several times been asked in the Farmer, I will answer according to my own knowledge, having fully tested it. Wash the trees' trunks and branches within reach, with a strong ley of wood ashes, letting the ashes remain in the ley, stirring it occasionally while applying it. Do this in May or June *every* year. This will serve a double purpose, being good also for the health and growth of the tree, as by analyses the wood of the apple tree is shown to contain a large per cent. of potash. The other part of the remedy or preventive is to put the trees in a *healthy* condition and *keep* them so by proper pruning, cultivation and care in all respects. This requires time and expense, but it pays in the extra quantity and quality of the fruit.

In this connection, let me ask, who that has a cultivated taste cannot readily tell a good apple from a poor one—or one that has been grown on a healthy, cultivated tree, from one grown on a sickly, unpruned, uncultivated, neglected tree, not only by its size and fairness, but also by its much better flavor? The time will come, if it has not already, when purchasers of fruit will be willing to pay prices according to quality, for apples and other fruits as well as for any other article of farm produce. Why should purchasers of apples pay the same price for the same kinds, when really there is so much difference in the *quality?*

E. Wyman.

East Westmoreland, N. H., Aug. 20, 1870.

HARVESTING AND COOKING CAULIFOWERS.

For the novelty of the thing, I planted this year some cauliflower seeds. They came up well and are doing finely, and I begin to think about the time when they will be fit for use. But neither myself nor my neighbors know how to prepare it for the table, for it never has been raised in this vicinity. Will you, or some of your contributors, please give me the desired information? I should also like to know how to pickle it.

Mary T. Standish.

Cliftondale, Mass., Aug. 23, 1870.

Remarks.—We are glad to hear that you have succeeded so well with your cauliflowers. It is reported that that old joker, the dictionary Johnson, once said, that "of all the flowers in the garden, I love the cauliflower best;" a very pretty way of saying, that of all the numerous varieties of the cabbage family, the cauliflower is the most delicately flavored. If the cauliflower is left out too long after the head or "curd" is formed, it sometimes opens, separates into branches, and becomes coarse, fibrous, strong-flavored, and unfit for the table. It is usually gathered in October, and hung up away from frost. If not fully developed, they are taken up with as much earth as possible about their roots, and reset in earth in a light, dry cellar, or in a box of earth in any light and warm place. Those that have barely blossomed, if treated in this way, will often grow during winter, and afford the whitest and most delicious "flowers."

For cooking the cauliflower about as many ways are practiced as in cooking other vegetables. After trimming off the leaves, let it lie half an hour in salt and water, then boil in fresh water for fifteen or twenty minutes, or until the fork will easily enter the stem. Milk and water is said to be better than water alone. Serve with sauce, gravy, or

melted butter. After putting on the butter it should be covered close.

For pickling, a writer in the *Country Gentleman* says:—"Have a kettle of boiling water, and put in one at a time, with top down, unless the kettle is large enough for more, and boil it until tender. Have ready a jar of cold vinegar, with cloves and mace; drain the cauliflower well, and put into the vinegar while hot. Cover tightly, and it will be ready for use in a week or ten days."

So much by way of book-cooking. Will some of our lady friends give their modes from practical experience?

GIRDLING APPLE TREES TO MAKE THEM BEAR.

I enclose an article credited to the *Horticulturist* which gives, in glowing colors, accounts of favorable results of girdling apple trees to induce fruitfulness. I have seen a similar recommendation in several papers. I once tried the experiment on some of my own trees. They bore some apples that season, but they will never bear again,—no, never! And it seems to me that the editor of the *Horticulturist* ought to have tried the experiment himself and waited till the next year to see its effect, before recommending his readers to girdle their trees, if he did not already know that a girdled tree must die. A. W.

South Royalton, Vt., Aug., 1870.

REMARKS.—"Ringing," as it is called, is an old trick to induce fruitfulness and early bearing, but is usually applied to a branch or two of a tree, and not to the trunk. The operation is performed in July, when it is desired to force the branch to form blossom buds; and just before blossoming, when the object is to set the fruit and retain it. It is not necessarily fatal. When a ring of bark of about one-sixth of an inch wide is removed from a limb, being careful not to injure the wood, granulations are generally formed and the flow of sap, though checked for a time, is finally restored, and the wound healed. But if the ring of bark is too wide for this healing process, the limb dies, of course. Tieing a cord around a limb is said to produce about the same effect, with less danger. Premium specimens of fruit are sometimes produced in this way. It is always more or less injurious to the tree, and is a practice that cannot be recommended for general adoption.

HINTS TO FARMERS' WIVES.

We presume that a great majority of farmers' wives may not need the hints contained in this article, but we *do know* that there are some which might be profited by putting them in practice. We know the innumerable cares and duties of a farmer's wife, cares which at times seem to crush out all life and energy. We know there are times when it seems almost impossible to bear the heat and burden of the day. Perhaps few women have fewer hours of leisure than the wives of farmers. With many of us *every* moment brings its work, and in order to live in happiness we must love to work and love *our* work.

We pity the woman who hates housework, but is obliged to go through what is to her the dull routine from kitchen to pantry, from garret to cellar; washing, ironing, cooking, cleaning, churning, skimming milk, washing pans, pails and dishes, making and mending, and oh! dear!—all, and much more, done with the feeling that she is being sacrificed to a life of drudgery, while qualified for some higher calling. But this restlessness and dissatisfaction with present position and occupation is not confined to farmers' wives nor to women. It is experienced by men and women in all ranks and professions of life. The great good they seek is ever just beyond their reach, and perhaps the highest lady in the land is little better satisfied with present surroundings than the farmer's wife, and none are higher in the sight of God than those who do their duty cheerfully, however humble may be their sphere.

But there is no disputing there are talents for *different* vocations among women, as well as among men, and we say again that we pity the woman who thinks she has missed her vocation, and instead of attempting to act well her part, and of improving her means of usefulness, spends her days in unprofitable regrets.

There are truly many pleasures to be found in a life on the farm. May they not be increased in many instances? Every farmer should provide conveniences to make his wife's work as easy and agreeable as possible. A farmer would think he was altogether behind the times if he should tread out his corn in a five-pail kettle, who lets his wife ply the needle far into the night, making garments for perhaps six or eight, when with proper working apparatus it is a pleasure to see with what expedition work can be turned off. The men of the farm should do the churning and working of butter. There is then enough left for the women to do, and there is pleasure in sending off the tubs of golden butter, especially if we know it will be called the best in the market.

But aside from work, could not we make our homes pleasanter? We do not have much time to spend in decoration, perhaps, but a few minutes each day may make our surroundings much more cheerful. We know of some farmers' families where, if you go into their homes during any time of the day, you will find the ladies (?) in ragged and mended dresses, without hoops, with uncombed hair and no sign of collar or ribbon. The dresses of their children, also, from their many colors, remind one of Joseph's coat, which in its day may have been a triumph in the art of tailoring; but in this instance the children are patched to save their father's purse strings; and this in a family with means at command to dress comfortably and tastefully.

We know there are many who are obliged to be very economical, but there are but few that cannot have a clean dress and collar to put on, when we sit down to do another kind of work. And the children, too, if kept clean and tidy, will grow up with more refinement of character than they will if they are obliged to wear their father's boots, pants and frocks till they will hold together no longer. Do all this for your own self respect; you feel more like somebody to sit down dressed up a bit, and when your husband comes in—mind you! I don't say do this *for* your husband,—that has been preached in every paper in the land! Do it for the purpose of pleasing him, and ten to one you never know by word or deed that it is appreciated. But, as I was saying,—when your husband comes in, you feel you are ready to receive him as in days that neither of you have forgotten.

Make home pleasant for the children. Provide books and games for the older ones, and plenty of pictures for the little ones. We know a little boy, only a little over two years old, who went into a neighbor's kitchen, as pleasant as many a farmer's kitchen, and looking round on the bare walls, said, "No pictures here, mamma!" The pictures of his home had their influence, and he noticed their absence here.

I intended to make a few more suggestions, but this article is already too long, and as I am not used to writing for the papers, it may not prove acceptable. In that case—time enough wasted.

E.

AGRICULTURAL FAIRS.

State and county cattle shows and fairs have been held annually in nearly all sections of New England for a great many years. But while the hoes and the spades used in 1870 are very different articles from those used fifty years ago, the agricultural Fair of this year is little more than a repetition of that held half a century since. The most striking change that has been made on the earlier programmes is seen in the introduction upon the fair grounds of the ancient horse race. We are not pleased with this change. It looks to us like progress backward, rather than forward. We should much prefer some such plan as is proposed by a writer for the *Prairie Farmer*, from whose article we copy the following suggestions:—

Without any disparagement to its labors, it may be said that the agricultural society hardly compares with the horticultural society or the dairymen's association as a working society. These last named associations do very much in the matter of investigation and experiment that, it appears to us, the State agricultural society would do well to imitate. They lay out work to do and assign men to perform it. They hear of blight and mildew, or huffy cheese, and the case is investigated and remedies found out. They determine the localities best adapted to the production of fruit and dairy products, and give the result of their labors to the world. They are not content to be simply recorders of progress, but they help on the work of progression. They hold few fairs; but their meetings are for the purpose of comparing experience, drawing out discussion and settling on determined results. There is as much need of having the new varieties of corn and grain tested in different parts of the State, and the result published, as there is in the case of new varieties of pears and blackberries, and on whom would the work so appropriately fall as the members of the State society?

There are many farmers in our State who have made themselves proficient in many branches of husbandry, who take little interest in fairs. While other men have been feeding cattle and swine, they have been studying the application of manures and the curing of grass. These men might contribute nothing to a fair, but in a farmer's convention, conducted like those recently held under the auspices of the Maine State Society, they would contribute facts that would be of immense advantage. Assemblages of this kind would serve to bring out talent that has heretofore been hidden, and would furnish the compiler of our reports with the most valuable materials for publication. The facts that were brought out at the Madison County Farmers' Convention last winter, and the interest that was attached to them, plainly shows that great good would result if similar meeting could be held at accessible points, under the management of the parent society.

We are aware that the efforts that have been made to introduce discussions of agricultural subjects at these fairs, have not always met with very encouraging success. It has been difficult to enlist the interest of farmers in these exercises, *as they have been conducted.* Somehow they do not seem to be in harmony with the stir and bustle of shows as usually managed. And the question is, What changes in the management of these exhibitions will secure the desired result? Would a style of proceedings somewhat similar to that adopted by pomological societies at their stated sessions prove efficient, and is such a change practicable? Questions of this kind are much more easily asked than answered. Evidently some change in the agricultural fair is demanded, and we think that which has been taking place of late years is not satisfactory. What then shall be done? Let us bear these questions in mind, as we attend the exhibitions this fall, and prepare ourselves to suggest and adopt such improvements as will make these annual fairs more useful and more instructive. The increase in the number and circulation of agricultural books and newspapers has been very great since agricultural fairs were first held in this country. Farmers read much more now than formerly. And this fact suggests to our mind the character of the improvements needed in the meetings and shows of agricultural associations.

PERSONAL.

The death of Benjamin F. Cutter, of Pelham, N. H., aged 68, is announced. In years past he was a frequent contributor to the New England Farmer. His last article, on "Trimming Pine Trees," was published in 1868, and was dictated, as from a lameness in his hand he was unable to hold a pen. His articles were marked by practical good sense and extensive information. He employed most of his time on botany, pomology and entomology, and contributed largely to agricultural and scientific publications.

The *Mirror and Farmer*, received since the above was written, says his death occurred on the 14th of August, from dropsy. It adds, that he was one of the most systematic farmers of the State. He was a native of Pelham, and was always content to make the old homestead his dwelling place, though through excellent taste he had added greatly to its value and its attractiveness. He was the originator of that popular berry known as Cutter's Seedling Strawberry. The loss of such a man will be felt beyond the circle of home, and even of the town, which he has benefited by his industry and skill.

In sending a communication to the *Mirror and Farmer*, Mr. Levi Bartlett, of Warner, N. H., who has measured more than his "threescore and ten," remarks, in a note, that the health of his hired man failing this spring, he was left to depend on himself and son, with an occasional day's work, to carry on the farm. He says, "Since the 18th of May I have performed as much labor on the farm as I used to forty years ago. By letting into my work like a 'thousand of brick,' my crops are free from weeds, and, except some falling off in the hay crop, they are a full average with previous years. Never had a better corn crop; oats ditto; five varieties of winter wheat, some winter-killed, but what survived the winter is No. 1; ten kinds of oats."

Carlos Pierce, of the firm of Pierce, Flanders, & Co., of Boston, and a breeder and exhibitor of stock, died at his residence in Stanstead, Can., Aug. 20, aged 40 years. He had spent the winter in Washington, and returned home somewhat unwell. His disease was typhoid fever, complicated with an attack of cholera morbus.

For the New England Farmer.

ILLINOIS PASTURES AND MEADOWS.

BY JOHN DAVIS.

If the great State of Illinois has any *forte*, it is agriculture. Soil naturally rich, and so level that there is scarcely a waste acre in a thousand, one can hardly fix a limit to the number of people she will be able to feed, when careful and intelligent farmers shall husband all her resources, and bring the soil to its utmost capacity.

I am not ignorant of the fact that much of her soil is underlaid with vast coal beds, and that hence her manufacturing capacity is immense. Yet, vast as is this capacity, it is not so universal or so cheaply available as is the fertility of the soil. Her climate, of course, is continental, and is more or less subject to extremes of temperature, drought and humidity. Yet, on the whole, not more than the average of fertile continental countries.

Grazing or grass growing for the production of live stock, is at the very foundation of Illinois agriculture. Reduce her to raising grain merely, and she would cut no great figure in the markets of the country. But if you would learn of her capacity, look over the cattle market reports of New York city. It is not uncommon to see the number of cattle from Illinois footing up greater than all the other States put together. And when we consider Ohio, Kentucky, Iowa and all the other great grazing States, this report respecting Illinois means a great deal.

Our best pasture grass is the Kentucky blue grass (*poa pratensis*). It stands drought and cold well. Its season of rest is from the ripening of the seed in June, until fall showers commence, say about the first of September. It is reliable for pasturage of the richest quality, from September till July, unless covered by snow.

The Redtop (*agrostis vulgaris*) is a fine pasture grass for wet lands. It makes a tight, strong sod, which drives out the weeds and wild grasses, and is not easily poached by the animals.

White clover (*trifolium repens*) is a hardy, nutritive little plant, which furnishes much pasturage in spite of us. It is the most aggressive plant we have, on some soils; will stand feeding, grief and abuse better than would appear possible. Upland clay soil, with considerable lime, appears to be its most suitable home. It is fine for cattle, sheep and hogs; but for horses, timothy (*phleum pratense*) is our great meadow grass. It is the universal preference for hay, and in the fall, after mowing, is largely fed down as pasture. Considering its universality, it must be reckoned, as a pasture grass, next to, if not equal to the blue grass itself.

Red clover (*trifolium pratense*) is usually the companion of timothy in the meadow for hay, and is most excellent as an early pasture, after mowing. Its season of rest is *not* in midsummer, but, regardless of heat or drought, springs up immediately after mowing, when it is sometimes much needed. It is not much used alone, either for hay or pasture. We do not use it much yet as a green crop to be ploughed under. In the meadow we prefer that it form about one-third or one-fourth of the crop of hay. The periodic decay of its long tap-roots enrich the soil and keeps it mellow. It does not run out in this region, but continually comes from the seeds, keeping its foot-hold in the meadow, with timothy, quite well.

The best time to sow blue grass, is with wheat or rye in the fall, though it frequently comes in the pastures, driving out all else, without the agency of man. Timothy is also sown in the fall, with the winter grains. It never appears of itself, as does blue grass. I have frequently seeded land by carefully scattering hay for the cattle, when snow is on, to prevent waste, on land sown to rye. Sown thus late, the first crop is rye entirely. After that timothy, making good fall pasture among the rye stubble.

Red clover is not safely sown in fall, as the young plants sometimes winter kill. It is mostly sown in March or early April, on land sown the fall previous, to timothy. Red clover does not appear on land itself, except the land has in times previous borne clover seed, or has been accidentally seeded by scattering manure.

White clover is seldom or never sown. It is universally viewed as an intruder. Though valuable, yet it is objectionable. Never growing large enough for hay, frequently causing horses to slabber badly, it is not near so profitable as other grasses.

In an article like this, and in a State as new as Illinois is, it would, perhaps, be just to notice the wild grasses of the country, which have contributed so largely to the convenience, wealth and credit of the State. Without being tedious, I can only say that there are several varieties, naturally adapted and almost always found in peculiar localities. Elevation, humidity, and texture of soil being almost always truly indicated by peculiar natural grasses. They all form tough sod, some of them much more so than any tame grass. Most of them bear seed, stand burning, grazing and considerable trampling, with impunity. Yet, when once subdued by cultivation, I have never known them to re-occupy the land, as tame grasses sometimes do. They are never sown by man, and are disappearing from the State very rapidly. Ten to twenty years ago they furnished by far the larger portion of summer grazing for the live stock of the State.

The great want in Illinois is *cheap* farm labor; and one reason why the grasses of the State have become so important, (aside from natural adaptedness,) is the ease and cheapness of their management. Pastures, of course, when fenced and established, require little outlay for annual labor. The stock live in them all the time, except during the severest winter weather, when the hay crop, or corn in the shock is made a substitute.

Hay is now secured on our level meadows, almost entirely with machinery, worked by horses. In a horse-raising country, like this, horse labor is cheaper than Chinese. An intelligent lad of fifteen to eighteen years old, with a good pair of horses, will cut about eight acres per day, with a forty-eight-inch iron mower. The hay is raked with one horse into windrows, at the rate of twenty or more acres per day. A bunching rake, with a horse at each end, managed by two small boys, will throw these wind-rows endways into piles, very fast. The piles are brought from different directions, and left in pairs—two and two,—near each other. The men then come with forks, throw one pile upon the other, trim down and top off. The shocks thus made should contain from three to ten hundred pounds. Toward the latter part of the week, the day of stacking comes. The two boys, with the bunching rake, bring the hay cocks to the stack. Some eight to ten are pressed together by the horses, for the foundation of a rick. The balance are brought alongside for the superstructure. The inevitable horse, with his crane, pullies and fork, managed by a boy on his back, hoists the hay on to the rick as fast as one man can stack it. Often two are required. One man is required to set the fork. Thus two men, three boys and three horses will stack an immense weight of hay in a day. Were it not out of season, I would *describe* some of our peculiar hay machinery. It will be more appropriate next June.

Haying is not the human drudgery it once was. It is much like going to war when the men are all officers. For the boys it is a regular gala day. On the spring seat, mowing, riding the bunching rake, or pitching hay on horseback, it is little else than fun for them.

Box 50, *Decatur, Ill., Aug.* 16, 1870.

ENCOURAGE HOME PRODUCTION.

At the opening of the recent exposition of Textile fabrics, at Indianapolis, the following remarks occur in the opening address of President Bowent of Chicago:—

"I need not tell you of the great improvement that has been made by our manufacturers during the past few years, for any one that has given any thought to the subject would readily notice, in examining the beautiful goods now on exhibition at this place, that we, as manufacturers, are marching on in the highway to success, and the question is, shall we make our success certain? The practical question is, shall we receive from the good people of our common country words of encouragement that shall make our services the more certain, or shall the people's verdict be against us, and the great market of our land be given to strangers, in part to our enemies? Are we able to produce such articles of textile fabrics as the market demands? Shall we influence our approval of the men and women of our nation in the use of American goods? Give us these and the fostering care of our government, and we shall soon see our glorious land with factories and foundries both north and south, and the tide of prosperity will be with us as heretofore unknown.

"We say, then, let us encourage these industries. Let us assert, in the full development of our great country, in which we all justly take pride, and with a prosperous and healthy state of our manufacturing interests all over the land, we shall enjoy thrift that will be most gratifying, and a page in the history of our political economy, yet unwritten, will be revealed unto us. I am greatly rejoiced to see so large a display of goods on exhibition from the Southern States of Kentucky, Tennessee, South Carolina and Georgia, showing to us the great interest our friends of the South are taking in this matter, which is indeed one of great importance to us all."

He called upon the ladies to wear shawls of home manufacture, instead of going to Scotland or France to obtain them. The West made just as good ones as the world could produce from wool.

—The Farm at the Maine Agricultural College, Orono, Me., contains 375 acres, about half being wood land. About 80 acres are in pasture and meadow. Only 17 acres are under the plough this season.

For the New England Farmer.

THE HORSE AT OUR AGRICULTURAL FAIRS.

The horse has always occupied a prominent place at our agricultural fairs; but within a few years he has taken a long stride forward and left all other domestic animals in the background, and now receives the major share of the premiums and of the time of both managers and attendants of the annual gatherings. Even man himself, with all his attainments, is cast into the shade by a good horse.

There can be no doubt that this increased interest in the equine race will result in its improvement, both in our estimation and treatment of it. The most casual observer can see that there is a great change of public sentiment in his favor—that his services are yearly better and better appreciated. Owners of horses take more pride than formerly in having an animal that bears unmistakable marks of kind usage.

This is one of the beneficial tendencies of societies and fairs, and is as it should be. But to secure the desired result, is it necessary that the horse should monopolize the time and premiums of our societies? It is not a little interesting to see how societies professedly devoted to the general cause of agriculture are making a specialty of the horse: for example, last year the premiums offered for the horse by the New England Society amounted to $4,500, while those for neat cattle in all their grades and classes was $2,190; less than $800 was offered for sheep and abount $260 for swine.

According to this schedule of premiums one unacquainted with farming in New England might reasonably suppose, that the value of horses exceeded that of all other stock. But the capital invested in cattle in these six States is 30 to 40 per cent greater than in horses, and yet this society is willing to expend two dollars upon horses to one upon cattle. The expense, risk and care of taking cattle to a fair is as great as with horses, yet the highest prize for a herd was less than the lowest prize in the trotting matches. The valuation of sheep in New England is nine and a half millions, or about one half of that of horses, yet this society considered a single trot worth more, or at any rate offered to pay more for it than for the benefit of sheep-owners. All the premiums offered for swine would be an insignificant purse for horsemen. Now, I think a prize bull and herd of cows are of far greater value to a community than a fast colt that can win a prize by his speed; and who will say that the improvement of the sheep and swine of New England is not of greater importance than the best race this society ever has or can get up?

Again, the highest prize for best mower, horse-rake, tedder, or any of these great labor-saving implements, was five dollars; and throughout the fruit, floral, vegetable and grain departments, and in that of domestic manufactures, merely nominal sums were offered. These, perhaps, are the same as other societies give. But I think a society that is willing to pay one thousand dollars for a horse trot, ought to give greater encouragement to exhibitors in all these important departments. One thousand dollars for a horse trot, five dollars for the best mower and thirty dollars for essays upon subjects of vital importance to farmers! Is this a fair, a just recognition of merit, talent or mechanical genius? The mower is the greatest blessing that mechanical ingenuity has lately given to farmers, and the price of all the trotting horses in a State would be no inducement to give them up. Five dollars to a trotting stallion and one thousand to the inventor of a mower or any other great labor-saving implement, would be a more just appreciation of what does really promote the welfare of the masses of farmers. Should money be the only inducement for writing an essay, the man so contemplating had better throw aside his pen, buy a fast horse and go in for the races. When the ladies see the trifling premiums offered for the works of their hands—the sum total being less than a horse jockey gets at a single race,—is it strange that they do not contribute more freely to these fairs?

Our agricultural literature abounds with discussions upon "Intellect in Farming," "The Superiority of Mind to mere Physical Power," but is it not working antagonistic to these well established truths when a higher premium is paid for physical than mental labor,—when a fast horse is valued higher than man himself. So long as horsemen receive the lion's share of the attention and premiums of our fairs, it is not strange that they assume consequential airs, and are inclined to snub cattle breeders and raisers of sheep and swine.

It is well known that the bulk of the money given to horsemen goes for racing, or, to speak more guardedly, trotting or trials of speed. The propriety of bestowing a society's income in this manner may well be questioned.

Passing by the effect as an amusement upon morals and the intellect, what are its consequences or benefits upon our horses? The aim of breeders of horses in this class is to obtain speed, for it is the fastest animal that wins the large premiums. Speed is cultivated to the exclusion of other qualities. In the days when a well mounted courier was the swiftest messenger, and hunting with horses was a favorite employment, there was a demand or necessity for breeding expressly for speed. But since the steam car and telegraph came into use, the real necessity for this description of horses has ceased; the mass of farmers do not want them; the community, as a whole, have no use for them.

The excitement caused by exhibiting at our

fair a few remarkable animals, and continually parading their feats and dwelling upon the money made by them, has caused many a man to attempt to produce likewise a fast steed, who, after all his care and expense, has seen his labors come to naught. With this one object in view, breeders have gone to an extreme, and are filling the country with stock horses said to be fast, when they were not needed. Had the enterprise been expended in producing horses of all work, roadsters and draught-horses, the capital would have been better invested, and greater and more lasting benefits would have been apparent, because there is a great and growing demand for horses of these classes. Plain farmers can breed animals of the latter description with some certainty of a remuneration. Great speed is, of all qualities, the least desirable to farmers; a rapid walk, ability to draw, are qualities that will always render a horse saleable.

There are too many dull, slow-walking, slightly built, and small horses in our markets. More time is lost daily by slow walking than has been gained by all the improvements in high speed.

Another point to be considered in connection with these trials of speed is the immediate effect upon the horses. Trotting inside of three minutes requires great exertion; few horses can do it without taxing their powers to the utmost. It is like loading a horse with the last pound he can draw, just to see him pull. Because a horse can draw two or three tons, it is no reason for putting that load upon him; and because a horse can trot a mile inside of 2.40, is it kind, merciful usage to put him to that test for amusement? Did these trials of speed serve to strengthen, prolong the life, or render a horse more useful, or give any positive benefit to spectators, then something might be said in their favor. They are simply putting a dumb animal to his utmost. Over-driving is the same as over-loading. Whether it is done upon a common road or under the auspices of an agricultural society, it is hazardous in the extreme, and such violent exertion tends directly to break down and shorten the days of the strongest constitution. Since this fashion for fast driving has prevailed, many a promising colt has been injured, permanently injured, by the ambitious and vain hope of its owner to make a fast horse of it. The association that fosters this taste by yearly opening grounds to contests of mere speed, and bestows its highest premiums upon the fastest horses, sanctions fast driving anywhere.

Thus, in whatever aspect the subject is viewed, it is open to serious objections. The society that desires to promote the interests of farmers, is bound to respect the interests of all, and not let one class of exhibitors, or objects, monopolize the premiums, to the exclusion of others of equal and far greater importance. Those societies who choose to make a specialty of the horse, and let horsemen govern, should at least take another name than *agricultural*. N. S. T.

Lawrence, Mass., Aug. 25, 1870.

DO BEES GATHER OR MAKE HONEY?

I am decidedly of the opinion that they gather it and deposit it in the hive, without any modification whatever. There are few things we can say we *know* are not so; but it seems to me to be too late in the day for any one to maintain that honey is manufactured by the bees. As for their making honey from molasses, I will not say I *know* they never will, but I do know *I* never could induce them to use a particle of it, and I have tried numerous experiments with it. The foundation for the belief that they ever use it, probably lies in the fact that the bees will gather the sugar settled in the bottom of molasses casks, but observation will show that it is only the sugar. I never could detect them carrying off one drop of liquid molasses.

Likewise, I have satisfied myself that bees seldom visit more than one kind of blossom during one excursion; have known exceptions. There is no evidence, however, that, as is maintained by some, they are particular about storing each kind of honey by itself in the hive. One may discover cells of clover honey, discolored by buckwheat, which is neither pure clover or buckwheat.—*M. Quinby, in Rural New Yorker.*